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IDENTIFIERS	*Ohio

ABSTRACT

These two documents present an executive summary and the full text of Ohio's master plan for higher education. Principles underlying the plan include use of collaboration to improve access and quality in cost effective ways; academic excellence consistent with specific campus missions; and consideration of local, regional, state, national, and international contexts in making decisions. Strategies for individual campuses reflect the following overall objectives: improvement of student access and graduation rates, improvement of the effectiveness of learning experiences, research focused on achieving optimal benefits in both basic and applied research; focus on enhancing Ohio's economic development and quality of life; and development of collaborative partnerships to improve productivity. Statewide objectives include: improving the predictability and stability of state funding of higher education; strengthening the differentiation of campus missions; implementing a funding model that reflects the state's goals; enhancing statewide coordination by providing better management information identifying state-wide responsibilities, and facilitating the work of campuses through technology. Broad goals for the year 2006 include: more varied access options, better-prepared students, emphasis on liberal learning, improving quality through shared resources, and an integrated network of high-performance campuses. (DB)

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THE CHALLENGE IS CHANGE

OHIO'S MASTER PLAN FOR HIGHER EDUCATION

EXECUTIVE SUMMARY

1996

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"To the future generations of Ohio College Students with our best determination."

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formulate a master plan for higher education for the state,

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Ohio Revised Code 3333.04

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Ohio's Master Plan for Higher Education, 1996

The Challenge is Change

All of history is the story of changing times. With each new generation have come new tools, new customs, and new ideas. But as we approach a new century, we have entered a time of transformation – a time when social, economic, and political systems are being revolutionized – when new tools are creating new patterns of work, of leisure, and of family life – when conventional wisdom is being challenged and new ways of thinking are being born.

Ohio's higher education community of public and independent colleges and universities must not only meet the totally new challenges posed by this transformation but also cope with the effects of shifting resources, changing student needs, new competition created by technology, and increased demands for high quality, affordable services. Efforts to meet these unprecedented challenges began in 1991 when the Ohio Board of Regents, at the request of Governor George V. Voinovich, appointed the Managing for the Future Task Force. This group of leaders from higher education, local communities, and business and industry clarified the tremendous challenges and opportunities Ohio faces and recommended future directions for meeting them.

Since the release of the Task Force's report in 1992, the Board of Regents and Ohio's colleges and universities have been engaging in an ongoing process of dialogue, state-wide planning, and action. Some actions are already completed – clarification of functional missions, establishment of faculty workload guidelines, a review of doctoral programs, and the development of service expectations for two-year campuses. This Master Plan is a blueprint for continuing to meet the challenges of change.

photo: Ohio University

Taking notes in class is a college tradition that continues in today's learning environment...

photo: Ohio University

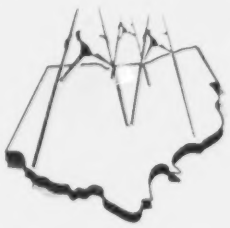
...but taking part in class means something new for today's college students. A student in this Ohio University accounting class makes a point to his classmates located at the University's four regional campuses and linked via an interactive audio and video system.

A Vision for the 21st Century

Ohio calls upon its colleges and universities to provide a spectrum of high quality learning experiences that are accessible to all Ohioans, research that creates productive partnerships with Ohio business and industry, education and training that fosters leadership and citizenship in its students and strengthens Ohio's workforce, and services that address not only the state's needs, but the needs of its diverse communities and regions as well. Ohio's colleges and universities have accepted the obligation to improve continually and be accountable for the results they achieve.

But in tomorrow's world, as resources remain tight and demands increase, there will be a greater need for collaboration among campuses for optimizing the use of resources, harnessing new technologies, and developing innovative strategies to meet the challenge of providing access to a high quality education. Each campus is called upon to respond importantly in its own best way but also as part of a larger significant whole: a coherent network that will meet Ohio's diverse requirements, extending into schools, workplaces, governmental bodies, and even into the homes of citizens.

Even as it stretches to serve, Ohio's network of campuses must overcome the challenges posed by a shift in public priorities that has created a severe gap between the services required and the public funding received. This network will be an investment that results in a better education for all Ohioans who seek it, and in better jobs for large numbers of Ohio citizens – whose increased taxable income will, in turn, be used to the benefit of all Ohioans.



Ohio colleges and universities can achieve better educational opportunities for Ohioans by linking resources across the state.

This Master Plan reviews the strengths Ohio has that will be the foundation for the vision, some opportunities for growth, and the major challenges of change. It also outlines the major objectives for Ohio's higher education community and discusses strategies for meeting those objectives. Objectives and strategies are offered for individual campuses to be considered, adapted and prioritized by their boards of trustees according to their unique Functional Missions. State-level objectives and strategies are provided to assist the Ohio Board of Regents in promoting access, excellence, affordability, and research throughout the system as it works with campuses to ensure accountability and achieve results. The Board of Regents will be an advocate for increased funding for higher education in areas which show real promise for state-wide economic return.

As a nation – and as a region – we're competing with the the world's best, and our institutions of higher learning are an absolutely vital part of the mix. If they don't succeed, Ohio as a state will not succeed.

George V. Voinovich
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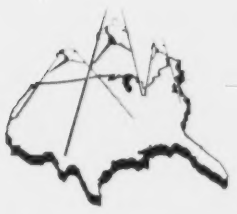
Achieving the Vision

Creating a coherent network of campuses throughout the entire state requires commitment, persistence, and careful attention to strategies by each of the major stakeholders: college and university administrations, boards of trustees, students, faculty, and staff as well as the Ohio Legislature, the Board of Regents, parents, families, and citizens.

Above all strategies, three powerful principles will serve to guide all stakeholders in the future of higher education:

- using collaboration to parlay access and quality in cost-effective ways,
- achieving academic excellence consistent with specific campus missions, and
- considering the full context – local, regional, state, and in some instances, national and international – when making decisions.



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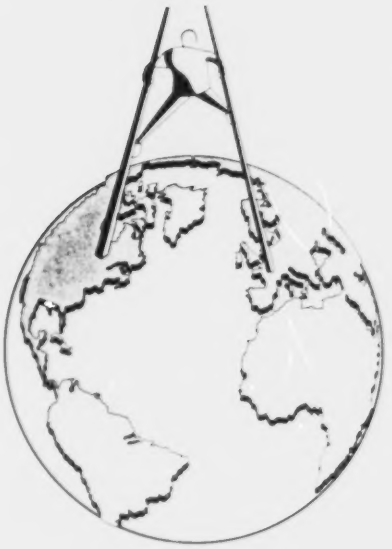


The World Wide Web will enable the boundaries of traditional educational delivery to come down.

The objectives and strategies in this Master Plan balance two needs and one reality:

- the need to confront the challenges of the present by improving quality, increasing educational attainment statewide, and increasing accountability,
- the need to prepare for the challenges of the future by collaborating, taking advantage of the potential benefits offered by technology, and adopting innovative approaches to learning.

The reality is learning to live with constrained resources and the concomitant need, therefore, to make choices.

Strategies offered for the individual campuses align with the following objectives:

- Improve student access and increase graduation rates by using a variety of means to serve greater numbers of students and to create greater flexibility in the time and location of learning, by promoting efforts to increase the access and success of under-represented groups, by supporting their learning needs and promoting outreach programs for future college students.

photo: Columbus Board of Education

Options and time lines for degree completion will vary for the high school graduates of 2002, but each will need the opportunity to succeed in higher education more than any previous generation of Ohioans.

photo: Ohio State University

Ohio Eminent Scholar and Ohio State University Professor of Molecular Genetics Alan Lambowitz and a senior honors student study a protein in fungus that may be an ancestor of a protein in HIV.

- Improve the effectiveness of learning experiences by encouraging and rewarding teaching, by further engaging ranked faculty in undergraduate learning, by creating and applying learner-centered approaches, and by collaborating in developing new learning experiences.

Campus Objectives

- Focus research to achieve optimal benefits by enhancing areas of excellence in both basic and applied research, by identifying how research can contribute to community and regional revitalization goals and improved quality of life, and by pursuing activities that add value to research.

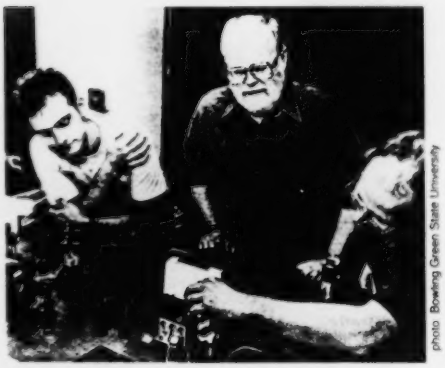


photo: Bowling Green State University

Dr. Michael A.J. Rodgers (center), an Ohio Eminent Scholar and a Professor of Chemistry in Bowling Green State University's Center for Photochemical Sciences, and two research assistants make the final adjustments on an experiment using one of the Center's lasers. The transfer of light into chemical energy, has many potential applications including the absorption, storage and transfer of solar energy.

photo: University of Toledo

University of Toledo President Frank E. Horton (2nd from left) and William Phillips, President of Mauch Laboratories, sign a research and licensing agreement to market a UT prosthetic invention. Co-developers (left) Dr. Stephen N. Kramer, UT Professor of Mechanical Engineering, and Vern Swanson, Director of Swanson Orthotic and Prosthetic Research Center, were also present.

photo: Owens State Community College

All future factory-authorized Caterpillar technicians in Ohio, Indiana and Michigan will hold associate degrees from Owens State Community College (Toledo). Caterpillar is counting on Owens to provide technicians who understand the technology of today's sophisticated machinery and who can apply broad critical thinking skills to any problem.

- Become a vital partner in enhancing Ohio's economic development and quality of life through efforts to support workforce enhancement and provide public services needs.

- Deliver the greatest benefit from resources by improving productivity, by developing collaborative partnerships, and by developing and meeting standards of quality in all areas.

Lorain County Community College President Roy Church, Kent State University President Carol Cartwright, Cleveland State University President Claire Van Ummersen, Cuyahoga Community College President Jerry Sue Thornton, and Lakeland Community College President Ralph Doty (l to r) were among seven northeast Ohio public college and university presidents who signed a compact promising greater ease of transfer for all students and "Guaranteed Admission" for students who meet certain criteria.

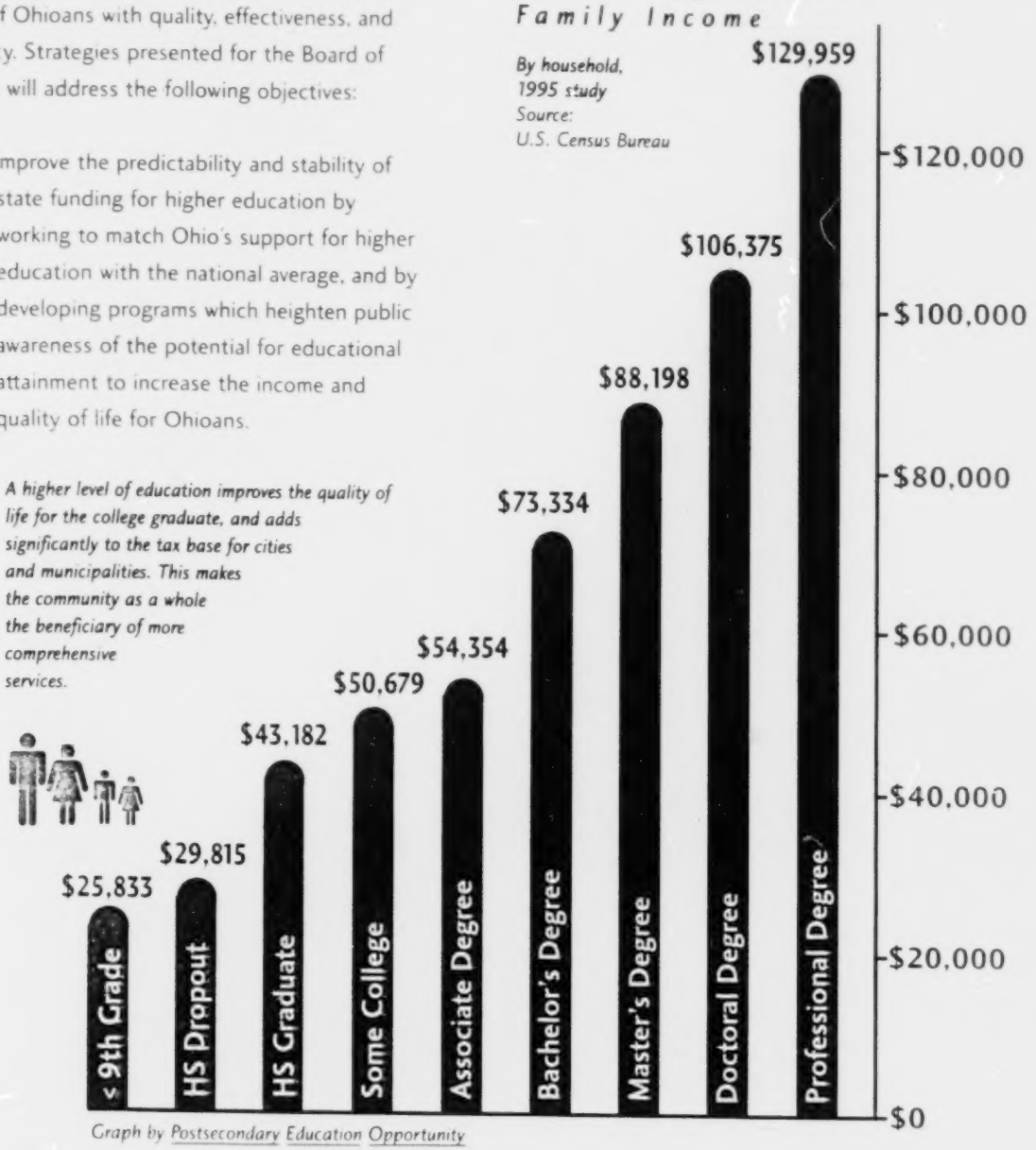
The Board of Regents will be responsible for facilitating the capacity of campuses to serve the educational needs of Ohioans with quality, effectiveness, and efficiency. Strategies presented for the Board of Regents will address the following objectives:

- Improve the predictability and stability of state funding for higher education by working to match Ohio's support for higher education with the national average, and by developing programs which heighten public awareness of the potential for educational attainment to increase the income and quality of life for Ohioans.

A higher level of education improves the quality of life for the college graduate, and adds significantly to the tax base for cities and municipalities. This makes the community as a whole the beneficiary of more comprehensive services.

Educational Attainment and Average Annual Family Income

By household, 1995 study
Source: U.S. Census Bureau

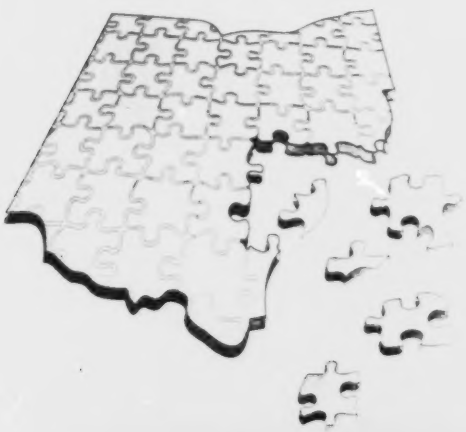


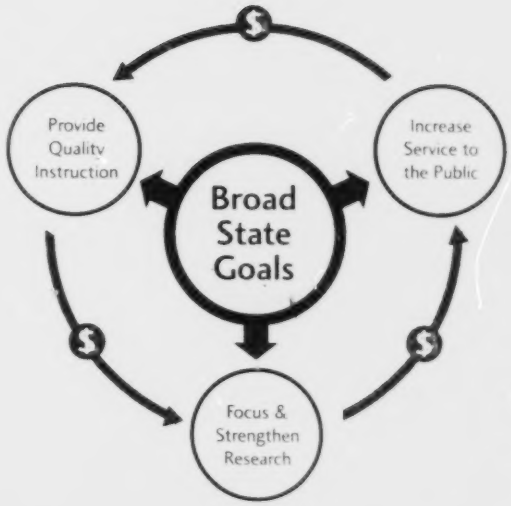
Graph by Postsecondary Education Opportunity

State-Wide Objectives

- Focus the state's investment by strengthening the differentiation of campus missions, by promoting the complementarity of graduate education, by coordinating research strengths in areas of state, national, and international directions and goals, and by strengthening the technology infrastructure.

By building the strengths of individual colleges and universities into a network of diverse strengths, the combined whole becomes greater than the sum of its individual parts.





- Implement a funding model that reflects Ohio's goals for higher education.

The benefits of college degrees extend well beyond the immediate improvement in quality of life for the families of the graduates. Statistically, children of graduates are more likely to pursue college degrees, ultimately benefiting generations of families.

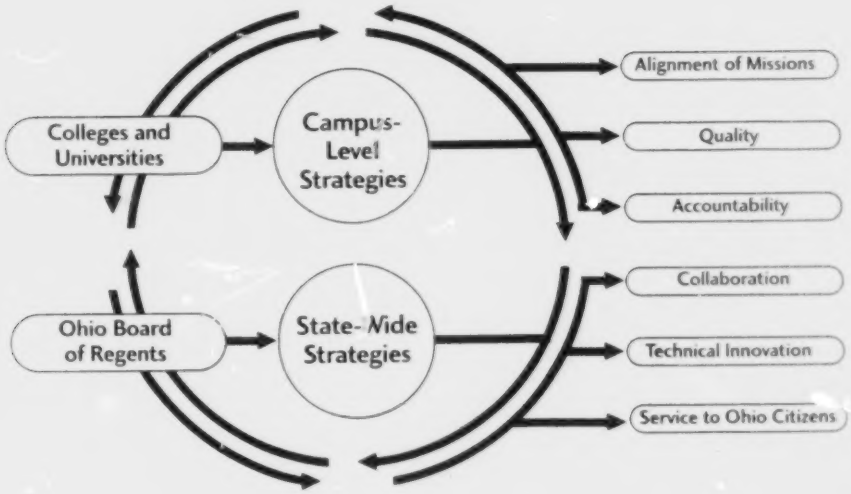
photo: Cuyahoga Community College

photo: Ohio University

- Enhance state-wide coordination by providing better management information, identifying state-wide responsibilities, and facilitating the work of campuses through technology.

The Ohio Board of Regents is currently working to develop a state-wide communications network that would allow students at any campus to evaluate their academic record against degree requirements at any other college or university in any major. If successful, that effort would represent a quantum leap in an individual student's ability to plan and manage his/her academic career.

In proposing these state-wide objectives, the Board of Regents recognizes that there has evolved in Ohio an effective management system for public colleges and universities that is based on institutional autonomy and state-level coordination. The balance between responsible local campus governance and state-level public coordination and planning has fostered a strong and diverse system of higher education. The tensions that naturally arise from such a system, while often disparaged, are necessary to ensure that all public interests are well served and should be regarded as reciprocal and creative catalysts for new thinking and change. The Board of Regents is fully committed to institutional autonomy as it meets its statutory responsibilities for coordination and planning.



Where are We Heading?

Ohio Higher Education in 2006

Imagine that ten years have passed since Ohio's higher education community began its transformation to become **a coherent network of colleges and universities whose complementarity of mission ensures the provision of high quality and affordable education to meet the needs of the citizens of Ohio.**

In 2006, resources continue to be constrained. Problems, often caused by increasing change and complexity, continue to exist.

But life is different for students at Ohio's campuses. Each college and university is focused on continuous improvement with respect to its self-determined mission; each is also part of a larger whole formed by working together toward common goals.

Many Access Options

Higher education has never been in greater demand. Ohioans have never held their colleges and universities in higher regard. Ohio's student body has never been more diverse or more representative of Ohio's population. Most students pursue academic and career goals simultaneously.

In 2006, all students have a high likelihood of success. Each campus has special programs and services that align with its students' most prevalent needs. Where needs are too large, too small, or too complex for one campus, regional or state-wide alliances provide needed services.

Prepared Students

Most new students are ready to meet the academic demands of the collegiate environment. Those coming directly from high school have a solid academic base built through college-school collaboration. Many have a foundation of industry experience developed through programs such as Tech Prep and School-to-Work. Some have already earned collegiate credits or otherwise accessed advanced learning opportunities.

Emphasis on Liberal Learning

For all undergraduates in 2006, college is a time of continued inquiry and discovery of the world and the self in a range of learning environments created by innovative faculty. Graduates leave with an array of skills and knowledge, the ability and expectation to continue learning, habits of thoughtful reflection and ethical decision-making, a sense of values, and a commitment to society.

Recognition of Diverse Learning Needs

All students progress in a coherent way, mentored by faculty who are cognizant of their learning styles and academic strengths. Faculty guide students to the resources they need to succeed, and remove obstacles to learning. In 2006, the goal is to educate the student.

Quality through Sharing Resources
Each campus clearly articulates its mission, and students choose the campus that best aligns with their major academic and career goals. If a student's goals cannot be met at one campus, collaborative relationships among campuses open the needed options. Students in 2006 can transfer easily, combine coursework from different campuses, and choose among many distance learning opportunities.

Improved Access through Distance Learning
Most Ohio students take advantage of distance learning options at some point in their academic career. These options have enriched the range of learning experiences open to students, and improved the operational productivity and instructional expertise of campuses.

The Technology Transformation
Technology has helped make learning a highly active and interactive experience. In 2006, electronic mail and on-line discussion forums are commonplace. Faculty use class time to engage students in active problem-solving through computer tools. Outside class, students can review and supplement course material using computer resources, including materials developed by faculty for specific students. Technology has helped make the development of critical thinking skills the most definitive aspect of the collegiate experience.

Strong Ties to the Workplace
Boundaries between the workplace and Ohio's colleges and universities are crossed easily and often. Higher education works closely with business and industry to exchange the latest technologies and methods. Industry leaders, researchers, and government officials throughout Ohio play a vital role in helping prepare students for future employment. Faculty and students participate in initiatives to help build communities. Economic development initiatives sponsored by industry and by state government depend on the participation and ideas of the higher education community.

New Dimensions in Research
Graduate and faculty research at individual campuses is highly focused on areas of excellence. From a state-wide perspective, there is a high degree of integration. Each campus has a research agenda that matches its strengths with important state and regional needs.

An Integrated Network of High Performance Campuses
In 2006, Ohioans view the state's 70 four-year and 52 two-year public and independent campuses both as an array of strong, diverse and unique higher education entities that differ from one another in important ways *and* as a totality: one vast integrated network of higher education service providers, eager and able to help Ohioans meet the complex challenges of 21st Century life.

Reaching the Goals
This integrated, high performance network will evolve as faculty, students, administrations, and Boards of Trustees from all Ohio colleges and universities, along with the Ohio Board of Regents, state government, and industry, become partners in serving the common good. Working together, our vision of higher education is within reach. Working separately and apart, it is unreachable.

" I believe strongly in the capacity of higher education to enrich and change lives and to serve well students, communities, regions and the state."

Elizabeth Lanier
Chairman,
Ohio Board
of Regents

The Collegiate Experience is...

photo: Bowling Green State University

photo: Ohio State University

photo: Miami University

photo: Cleveland State University

photo: University of Toledo

photo: Bowling Green State University

photo: Swanee State University

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a multi-dimensional, all-encompassing, life-changing experience.

Acknowledgments

Preparation of the 1996 Master Plan, "The Challenge is Change," required the thoughtful and consistent involvement of the many members of the family of higher education in Ohio -- the members of the Ohio Board of Regents, members of the Boards of Trustees of Ohio's public colleges and universities, the Presidents of the public and independent colleges and universities, Provosts and other senior administrators, members of the Chancellor's Faculty Advisory Committee, the Inter-University Council, the Ohio Association of Community Colleges, the Association of Independent Colleges and Universities of Ohio, and the staff of the Ohio Board of Regents. Their contributions included participation in regional focus sessions to discuss the major issues facing higher education in Ohio, arranging discussions of the Master Plan with their constituent groups, and providing critical evaluations of successive drafts. The importance of their contributions is evident on each page of the Master Plan.

A special recognition is merited by Regent Tahlman Krumm, Jr. for his participation and helpful advice throughout the planning, writing, and production of this Master Plan. Although this report does not bear the names of the three former Regents whose nine-year terms expired in September of 1996 (Paul M. Dutton, Ralph K. Frasier, and Raymond T. Sawyer), its content was shaped in many ways by their dedicated service and thoughtful consideration of issues. Several members of the Regents' staff also deserve recognition for their work in fashioning the final product -- Richard L. Petrick, Associate Vice Chancellor for Budget & Information Systems, who researched the statistical data on higher education in the nation and Ohio; Linda J. Ogden, Director of Communications, who coordinated the graphic design and layout of the final copy; and Charles E. Corbato', Director of Information Services, who provided proofreading and file transfer services, and posted documents on the World Wide Web. Finally, a special appreciation is due Howard L. Gauthier, Executive Associate to the Chancellor for Planning, whose careful direction of the overall planning and writing of the Master Plan spanned years of effort and yielded a coherent, challenging path to our future.

Elaine H. Hairston
Chancellor
November, 1996

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FULL TEXT

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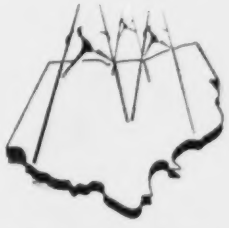

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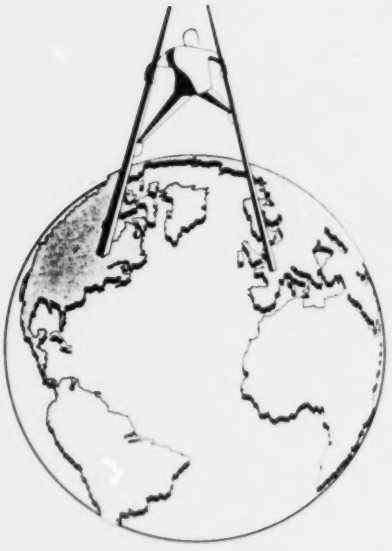

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photo: Columbus Board of Education

Options and time lines for degree completion will vary for the high school graduates of 2002, but each will need the opportunity to succeed in higher education more than any previous generation of Ohioans.

photo: Ohio State University

Ohio Eminent Scholar and Ohio State University Professor of Molecular Genetics Alan Lambowitz and a senior honors student study a protein in fungus that may be an ancestor of a protein in HIV.

- Improve the effectiveness of learning experiences by encouraging and rewarding teaching, by further engaging ranked faculty in undergraduate learning, by creating and applying learner-centered approaches, and by collaborating in developing new learning experiences.

Campus Objectives

- Focus research to achieve optimal benefits by enhancing areas of excellence in both basic and applied research, by identifying how research can contribute to community and regional revitalization goals and improved quality of life, and by pursuing activities that add value to research.

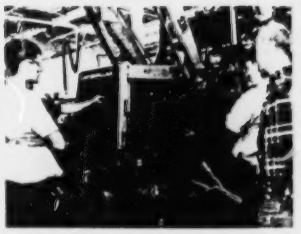


photo: Owens State Community College

All future factory-authorized Caterpillar technicians in Ohio, Indiana and Michigan will hold associate degrees from Owens State Community College (Toledo). Caterpillar is counting on Owens to provide technicians who understand the technology of today's sophisticated machinery and who can apply broad critical thinking skills to any problem.

photo: Bowling Green State University

Dr. Michael A.J. Rodgers (center), an Ohio Eminent Scholar and a Professor of Chemistry in Bowling Green State University's Center for Photochemical Sciences, and two research assistants make the final adjustments on an experiment using one of the Center's lasers. The transfer of light into chemical energy, has many potential applications including the absorption, storage and transfer of solar energy.

- Become a vital partner in enhancing Ohio's economic development and quality of life through efforts to support workforce enhancement and provide public services needs.

- Deliver the greatest benefit from resources by improving productivity, by developing collaborative partnerships, and by developing and meeting standards of quality in all areas.

photo: University of Toledo

University of Toledo President Frank E. Horton (2nd from left) and William Phillips, President of Mauch Laboratories, sign a research and licensing agreement to market a UT prosthetic invention. Co-developers (left) Dr. Stephen N. Kramer, UT Professor of Mechanical Engineering and Vern Swanson, Director of Swanson Orthotic and Prosthetic Research Center, were also present.

Lorain County Community College President Roy Church, Kent State University President Carol Cartwright, Cleveland State University President Claire Van Ummersen, Cuyahoga Community College President Jerry Sue Thornton, and Lakeland Community College President Ralph Doty (l to r) were among seven northeast Ohio public college and university presidents who signed a compact promising greater ease of transfer for all students and "Guaranteed Admission" for students who meet certain criteria.

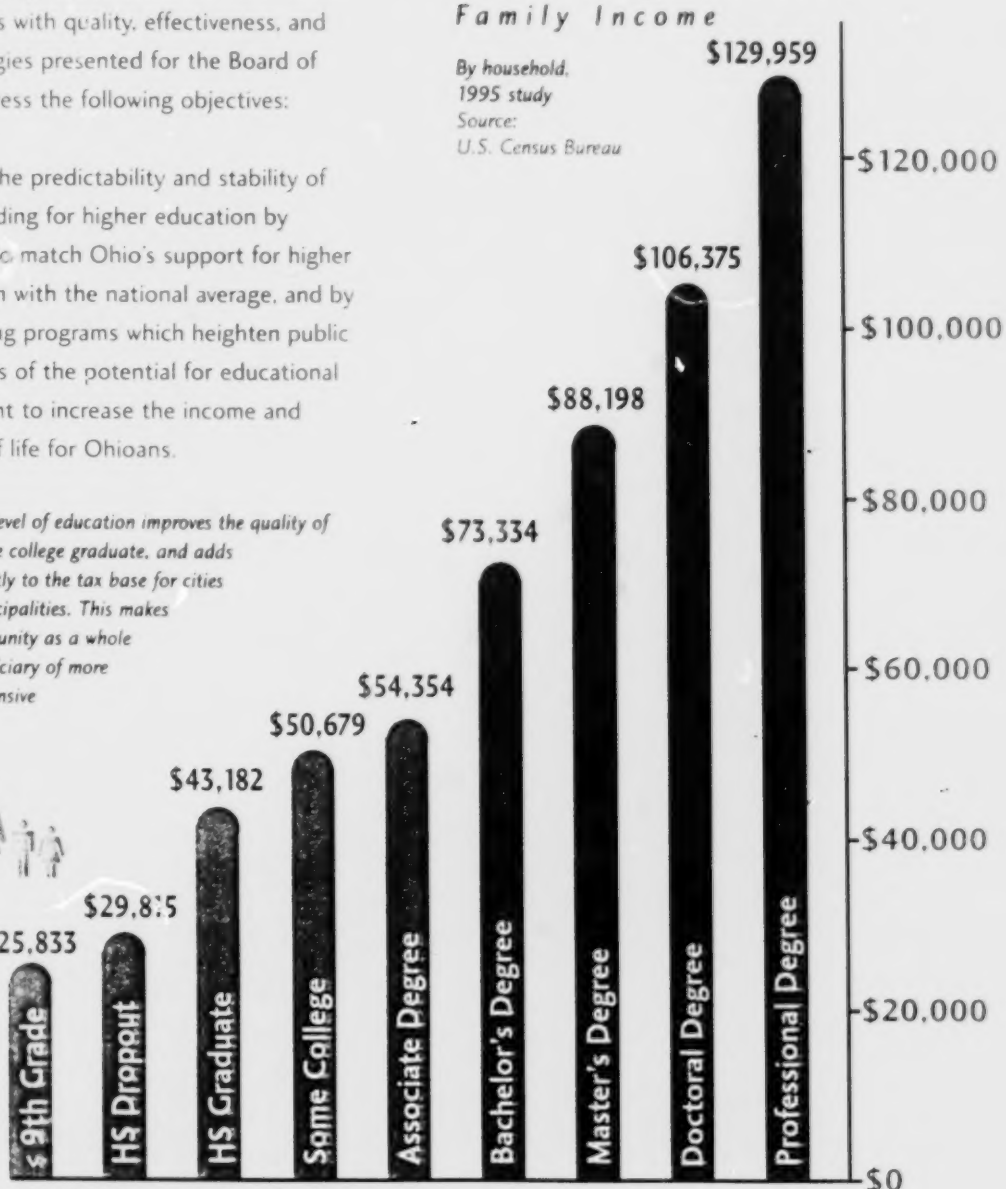
The Board of Regents will be responsible for facilitating the capacity of campuses to serve the educational needs of Ohioans with quality, effectiveness, and efficiency. Strategies presented for the Board of Regents will address the following objectives:

- Improve the predictability and stability of state funding for higher education by working to match Ohio's support for higher education with the national average, and by developing programs which heighten public awareness of the potential for educational attainment to increase the income and quality of life for Ohioans.

A higher level of education improves the quality of life for the college graduate, and adds significantly to the tax base for cities and municipalities. This makes the community as a whole the beneficiary of more comprehensive services.

Educational Attainment and Average Annual Family Income

By household, 1995 study
Source: U.S. Census Bureau

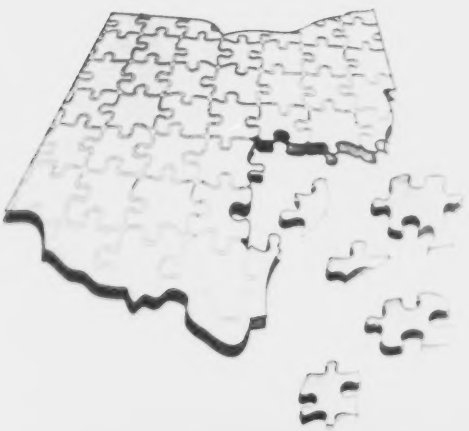


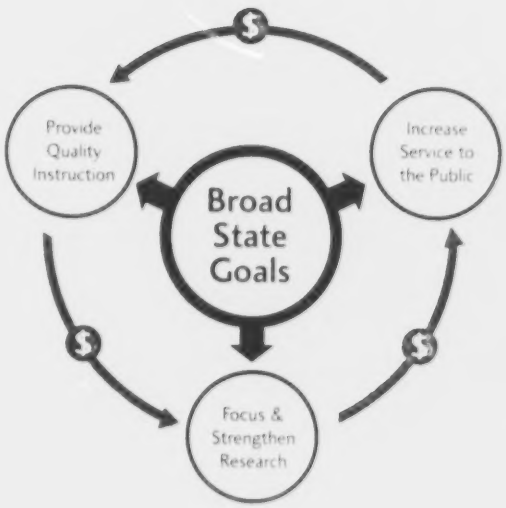
Graph by Postsecondary Education Opportunity

State-Wide Objectives

- Focus the state's investment by strengthening the differentiation of campus missions, by promoting the complementarity of graduate education, by coordinating research strengths in areas of state, national, and international directions and goals, and by strengthening the technology infrastructure.

By building the strengths of individual colleges and universities into a network of diverse strengths, the combined whole becomes greater than the sum of its individual parts.





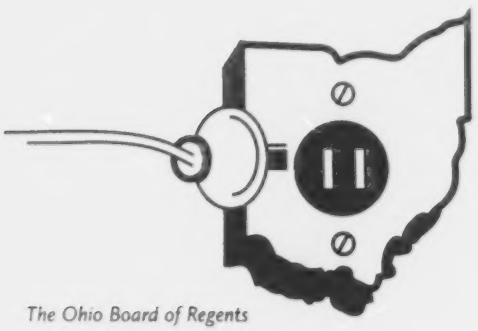
- Implement a funding model that reflects Ohio's goals for higher education.

The benefits of college degrees extend well beyond the immediate improvement in quality of life for the families of the graduates. Statistically, children of graduates are more likely to pursue college degrees, ultimately benefiting generations of families.

photo: Cuyahoga Community College

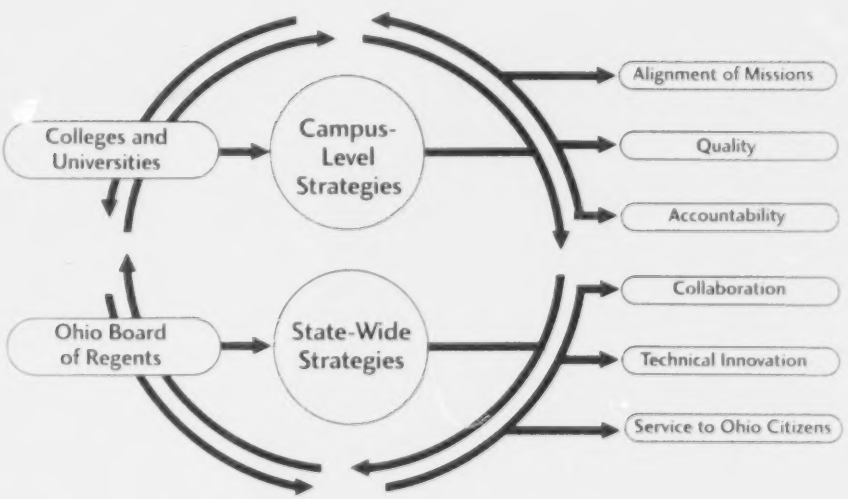
State-Wide Objectives

- Enhance state-wide coordination by providing better management information, identifying state-wide responsibilities, and facilitating the work of campuses through technology.



The Ohio Board of Regents is currently working to develop a state-wide communications network that would allow students at any campus to evaluate their academic record against degree requirements at any other college or university in any major. If successful, that effort would represent a quantum leap in an individual student's ability to plan and manage his/her academic career.

In proposing these state-wide objectives, the Board of Regents recognizes that there has evolved in Ohio an effective management system for public colleges and universities that is based on institutional autonomy and state-level coordination. The balance between responsible local campus governance and state-level public coordination and planning has fostered a strong and diverse system of higher education. The tensions that naturally arise from such a system, while often disparaged, are necessary to ensure that all public interests are well served and should be regarded as reciprocal and creative catalysts for new thinking and change. The Board of Regents is fully committed to institutional autonomy as it meets its statutory responsibilities for coordination and planning.



Where are We Heading?

Ohio Higher Education in 2006

Imagine that ten years have passed since Ohio's higher education community began its transformation to become **a coherent network of colleges and universities whose complementarity of mission ensures the provision of high quality and affordable education to meet the needs of the citizens of Ohio.**

In 2006, resources continue to be constrained. Problems, often caused by increasing change and complexity, continue to exist.

But life is different for students at Ohio's campuses. Each college and university is focused on continuous improvement with respect to its self-determined mission; each is also part of a larger whole formed by working together toward common goals.

Many Access Options

Higher education has never been in greater demand. Ohioans have never held their colleges and universities in higher regard. Ohio's student body has never been more diverse or more representative of Ohio's population. Most students pursue academic and career goals simultaneously.

In 2006, all students have a high likelihood of success. Each campus has special programs and services that align with its students' most prevalent needs. Where needs are too large, too small, or too complex for one campus, regional or state-wide alliances provide needed services.

Prepared Students

Most new students are ready to meet the academic demands of the collegiate environment. Those coming directly from high school have a solid academic base built through college-school collaboration. Many have a foundation of industry experience developed through programs such as Tech Prep and School-to-Work. Some have already earned collegiate credits or otherwise accessed advanced learning opportunities.

Emphasis on Liberal Learning

For all undergraduates in 2006, college is a time of continued inquiry and discovery of the world and the self in a range of learning environments created by innovative faculty. Graduates leave with an array of skills and knowledge, the ability and expectation to continue learning, habits of thoughtful reflection and ethical decision-making, a sense of values, and a commitment to society.

Recognition of Diverse Learning Needs

All students progress in a coherent way, mentored by faculty who are cognizant of their learning styles and academic strengths. Faculty guide students to the resources they need to succeed, and remove obstacles to learning. In 2006, the goal is to educate the student.

Quality through Sharing Resources
Each campus clearly articulates its mission, and students choose the campus that best aligns with their major academic and career goals. If a student's goals cannot be met at one campus, collaborative relationships among campuses open the needed options. Students in 2006 can transfer easily, combine coursework from different campuses, and choose among many distance learning opportunities.

Improved Access through Distance Learning
Most Ohio students take advantage of distance learning options at some point in their academic career. These options have enriched the range of learning experiences open to students, and improved the operational productivity and instructional expertise of campuses.

The Technology Transformation
Technology has helped make learning a highly active and interactive experience. In 2006, electronic mail and on-line discussion forums are commonplace. Faculty use class time to engage students in active problem-solving through computer tools. Outside class, students can review and supplement course material using computer resources, including materials developed by faculty for specific students. Technology has helped make the development of critical thinking skills the most definitive aspect of the collegiate experience.

Strong Ties to the Workplace
Boundaries between the workplace and Ohio's colleges and universities are crossed easily and often. Higher education works closely with business and industry to exchange the latest technologies and methods. Industry leaders, researchers, and government officials throughout Ohio play a vital role in helping prepare students for future employment. Faculty and students participate in initiatives to help build communities. Economic development initiatives sponsored by industry and by state government depend on the participation and ideas of the higher education community.

New Dimensions in Research
Graduate and faculty research at individual campuses is highly focused on areas of excellence. From a state-wide perspective, there is a high degree of integration. Each campus has a research agenda that matches its strengths with important state and regional needs.

An Integrated Network of High Performance Campuses
In 2006, Ohioans view the state's 70 four-year and 52 two-year public and independent campuses both as an array of strong, diverse and unique higher education entities that differ from one another in important ways *and* as a totality: one vast integrated network of higher education service providers, eager and able to help Ohioans meet the complex challenges of 21st Century life.

Reaching the Goals
This integrated, high performance network will evolve as faculty, students, administrations, and Boards of Trustees from all Ohio colleges and universities, along with the Ohio Board of Regents, state government, and industry, become partners in serving the common good. Working together, our vision of higher education is within reach. Working separately and apart, it is unreachable.

"I believe strongly in the capacity of higher education to enrich and change lives and to serve well students, communities, regions and the state."

Elizabeth Lanier
Chairman,
Ohio Board
of Regents

The Collegiate Experience is...

photo Bowling Green State University

photo Ohio State University

photo Miami University

photo University of

photo Cleveland State University

photo Bowling Green State University

photo Seawhite State University

photo Miami University

photo Bowling Green State University

a multi-dimensional, all-encompassing, life-changing experience.

OHIO BOARD OF REGENTS

THE CHALLENGE IS CHANGE

Ohio's Master Plan for Higher Education - 1996

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INTRODUCTION

Since 1991, Ohio's higher education community has been assessing the challenges it faces as the 21st Century approaches. During the early months of his first term in office, Governor George V. Voinovich asked the Ohio Board of Regents to undertake an extensive review of higher education. In response, the Regents appointed the Managing for the Future Task Force, a state-wide committee, composed of leaders from higher education, local communities, government, and industry. In 1992, the Task Force produced a range of recommendations for change on individual college and university campuses, as well as changes across Ohio's entire higher education system.

The Board of Regents reviewed the work of the Task Force and discussed the implications of its recommendations with leaders across the state as well as members of the public. Based on this review, the Regents issued a report, *Securing the Future of Higher Education in Ohio*. The Regents' report has since provided a blueprint for refocusing the state's limited resources on the areas of greatest public need and bringing Ohio's public support for higher education up to the national average.

From this five-year process has emerged a shared vision, a greater awareness of Ohio's values and strengths, a clearer sense of the transformation Ohio is facing, and new ideas for facing the challenges of change.

This Master Plan builds on the foundational work of the Managing the Future/Securing the Future initiative toward greater effectiveness and calls upon campuses and the Board of Regents to work together in shaping Ohio's future by outlining the goals and strategies that will be needed to achieve the vision.

"Higher education in Ohio is transforming itself. We are seeking nothing less than more efficient ways to deliver excellent educational services to Ohio and its people."

Elaine H. Hairston, Chancellor
Ohio Board of Regents

EVOLVING VALUES AND CHANGING NEEDS

"Three great federal policy initiatives are the land-grant movement of the 1860s, the GI Bill and the decision to rely on higher education for basic and applied research during World War II. They had historic importance to U.S. higher education. They introduced the idea of public service to the missions of higher education; they emphasized expanded access to higher education; and they strengthened the role of research in our universities."

Clark Kerr, President Emeritus, University of California

The values espoused by today's higher education community have their roots in the Middle Ages, when a growing desire for knowledge led to the formation of the first great universities. Through the rise and fall of ideas, philosophies, and governments – through the creation of the United States – through the past 150 years of extraordinary social, economic, and technological change that has taken place in Ohio and the rest of the country – the values of higher education have evolved.

Today, five core values guide the actions of the Ohio Board of Regents:

Photo: BGSU Firelands, Leslie Rusczkowski

Dr. Ronald R. Olsen, Associate Professor of Chemistry at Bowling Green State University's Firelands College in Huron, guides students through an experiment.

- Affordable access to higher education for Ohio citizens
- High quality learning experiences that help students develop to their fullest extent
- Basic and applied research that contributes to knowledge and meets regional and state-wide needs
- Services that help citizens, communities, regions, and the state, as well as businesses and industry, to meet their goals
- Effective, efficient use of limited resources and accountability for the use of public funds

Growth of the Core Values

Ohio's vision for its public and independent colleges and universities is based on a commitment to its core values and to citizens' needs and expectations as they face a changing world. For centuries, society has looked to liberal learning to forge the attitudes and attributes of a responsible, informed citizenry prepared to face challenging social and ethical issues.

In Ohio, as in many states, these values have been tested continually by a wave of changing needs and expectations that accelerated rapidly in the years following World War II, making the challenge of delivering quality higher education increasingly complex.

The Dream of Access

Access to higher education for all Americans has been a core value since Thomas Jefferson gave voice to his "dream of an aristocracy of achievement arising out of a democracy of opportunity." Through the Morrill Land Grant Act of 1862, which widened the formerly exclusive circle of college-educated Americans and enabled greater commitments to public service, and later, the G.I. Bill, which has provided federally funded financial support to each generation of veterans since World War II, the United States has dramatically expanded access to higher education. With the advent of federal Pell Grants and Guaranteed Student Loans – often supplemented by state financial aid – a modest income ceased to be an insurmountable obstacle to higher education.

In the years that followed, expanding access and increasing financial aid brought dramatic increases in the student population, accompanied by a more diverse campus culture, and a wider range of differences in the capabilities, goals, and special problems of students. In addition, new economic and social realities increased the number of students who viewed higher education not only as an experience in liberal learning but also as the first step toward higher income and greater success in the job market.

As these new demands and developments unfolded, Ohio's higher education system responded by attempting to meet a broader range of needs and continuing to work for improved access. In the decades following World War II, Ohio's public and private colleges and universities continually expanded their missions and added more educational options. During the 1960s, a number of two-year community and technical colleges were formed to meet the growing demand for more affordable educational options and training for a greater range of specialized careers.

"We believe quality, indeed excellence, must be our goal – in undergraduate education, training for new jobs, in world class research, in commitments to students and communities.

Raymond T. Sawyer, former Chairman, Ohio Board of Regents

The Quest for Quality

The two constants of a quality learning experience are motivated, well-prepared students, and faculty who blend a high level of accomplishment in their disciplines and a high degree of interaction with each of their students. In the years ahead, even greater student preparation will be necessary and faculties will still be judged by their accomplishments as teachers and researchers and by the scope of their interactions with students.

Campuses that provide high quality education may have fundamentally different goals and serve dramatically different student populations. But all provide environments where students mature intellectually and learn to excel at increasingly higher levels of performance.

In a high quality educational environment, synergy exists between specialized study and liberal learning. Students both pursue intensive study in a limited number of areas and gain continuing exposure to a broad range of disciplines. In addition, they integrate what they have learned across disciplines and prepare to continue learning throughout their lives.

Quality learning blends the need to acquire a body of knowledge with the need to gain experience through the performance of intellectually challenging tasks, independent research, and in-depth projects. In recent years, collaboration and a higher degree of attention to different learning styles also have come to be considered characteristics of a quality learning environment.

Photo: Miami University

This Principles of Microeconomics class at Miami University meets in the Procter & Gamble Information Center in Laws Hall. During class students participate in a clock-controlled run at buying, selling, and trading commodities, stocks and bonds. With the help of a program that simultaneously charts each student's moves, the students can compare "real life" experience to textbook models.

The Call for Focused Research

Research – with its capacity to generate new knowledge, enrich teaching, and foster a spirit of inquiry – has always played an essential role in shaping the values of higher education. However, before World War II, university research was conducted almost solely as a quest to satisfy intellectual curiosity and expand knowledge. In wartime, when a linkage between military strength and technology became evident, the federal government began asking university researchers to build upon the knowledge gained through theoretical research and to focus research activities on finding workable solutions to specific problems. Since then, applied research has joined basic research as part of the fundamental mission at many universities, creating a much greater connection between university research and the research goals of government and the private sector.

In the past two decades, an explosion in new high tech industries, resulted in even greater demands for the knowledge generated by university researchers, as well as for more employees with advanced degrees. As universities worked to keep pace with this increased demand, research has grown dramatically in scale and complexity, often requiring new facilities and advanced equipment. University research has become a major engine of growth for the nation's economy, not only because of new discoveries in science and engineering and other fields, but also because American industry and business need greater numbers of people trained as researchers. The education of new researchers is a major outcome of the research conducted by university faculty and staff.

University research is the cornerstone for the discovery of new knowledge in America. Applied research leads to direct benefits that are easily understood. Basic research leads to fundamental truths or original thought that is required for applied research. From medical science to agriculture to the arts and humanities, the spectrum of basic to applied research contributes to a better quality of life – improved health care, an enriched culture, better understanding of social phenomena, and general well-being of citizens – as well as to our economic productivity. In the information age, university research will be expected to contribute even more significantly to better conditions and to enhanced opportunities for all people in our society. Ohio aspires to be a leader in such university research endeavors.

"Community colleges help students achieve a goal – fulfill a dream – thereby improving their lives, and the lives of their families, enriching their local communities. The opportunities our institutions provide are education in the broadest sense – lifelong learning."

Maureen C. Grady, former National Chairperson, Association of Community College Trustees

Expansion of Public Service

From helping farmers produce more food a century ago to filling the need for a high tech workforce – colleges and universities have placed a high value on service to the public. Needs and goals have changed, but the commitment to helping individuals and society achieve their goals remains a constant for higher education.

After World War II, public and independent colleges and universities greatly expanded their role in preparing students for entry into the workforce. With each passing decade, new technologies and the increased complexity of many professions created new occupations and new areas of specialization for workers to pursue. Many of these occupations and specialties required an intensive period of training, but not always four years of college. By the 1970s, Ohio had a number of two-year community and technical colleges that were preparing citizens to fill these positions.

Since the 1980s, the increased quantity and complexity of medical equipment, industrial technologies, advanced office equipment, and computers has been both eliminating unskilled jobs and creating new careers. During the same period, technology revolutionized many skilled professions, such as graphic arts and accounting, automating many of their labor-intensive tasks but increasing requirements for technical knowledge and skill.

Finally, in recent years, increasing numbers of citizens have begun seeking opportunities to learn for the sake of learning – demanding ways to expand their involvement in the arts or become more informed about the world without making a long-term commitment to a degree program. Campuses began increasing their selections of non-credit adult education courses and seminars that satisfied the interests of the public.

Photo: Ohio University

A fourth-year student at the Ohio University College of Osteopathic Medicine (OU-COM) greets children preparing for their free immunization shots in Proctorville, Ohio. OU-COM's Childhood Immunization Program (CHIP) is one of several health-care rural services taken "on the road" through the college's Mobile Health Unit. From 1994 through 1996 more than 4,500 Southeastern Ohio children were immunized. The Mobile Health Unit also provides adult immunizations, and breast and cervical cancer screenings.

Each of Ohio's colleges and universities has a public service commitment that is an integral part of its mission and is based upon the needs of its region and the state. Contributions differ in range and scope from the state-wide cooperative extension service of a land-grant university to the tailored job entry training by a technical or community college for business, and industry. All include some aspects of partnerships with schools, other colleges and universities, public agencies, businesses, and industries to improve conditions within a community or region; specific service activities that build or unify the community; economic development joint ventures with community groups; and contributions to the arts and culture of the region. Taken together, the public service activities of Ohio's colleges and universities have a major impact on the quality of life of all Ohioans.

A Growing Accountability

Most American colleges and universities began as places for the consideration of matters outside the marketplace. During the 19th Century, they often were places that prepared ministers and teachers for service to religious denominations – or provided an intellectual experience to privileged young gentlemen. The average citizen saw little need to attend college and had little interest in the quality of higher education.

As the complexity of the world and its economy increased, taxpayers began providing a greater portion of the higher education budget but also expecting higher education to provide more solutions. Taxpayers became more aware of the role university research could play in the economic growth of states and regions throughout the country. Business and industry began to hold colleges and universities accountable for keeping pace with research needs, the expanding variety and sophistication of technology used in the workplace, and the growing need for most workers to seek new knowledge and skills. In addition, public awareness of the costs and benefits of higher education increased as families of modest means saved and sacrificed to make college a possibility for their children. During the 1980s, competition among college graduates became more intense, costs continued increasing, and resources became more scarce.

As a result, the public began to hold colleges and universities more accountable for their performance. The Ohio Board of Regents and Ohio's public and private colleges and universities value accountability as a way to become more efficient and effective in meeting Ohio's needs.

"Our greatness is not going to be measured by the number of Nobel laureates we have or the number of Rhodes Scholars we have...Ultimately, we're going to be measured by whether the people of this state believe, in their hearts and in their minds, that these institutions are making a difference in their lives. That is our greatness."

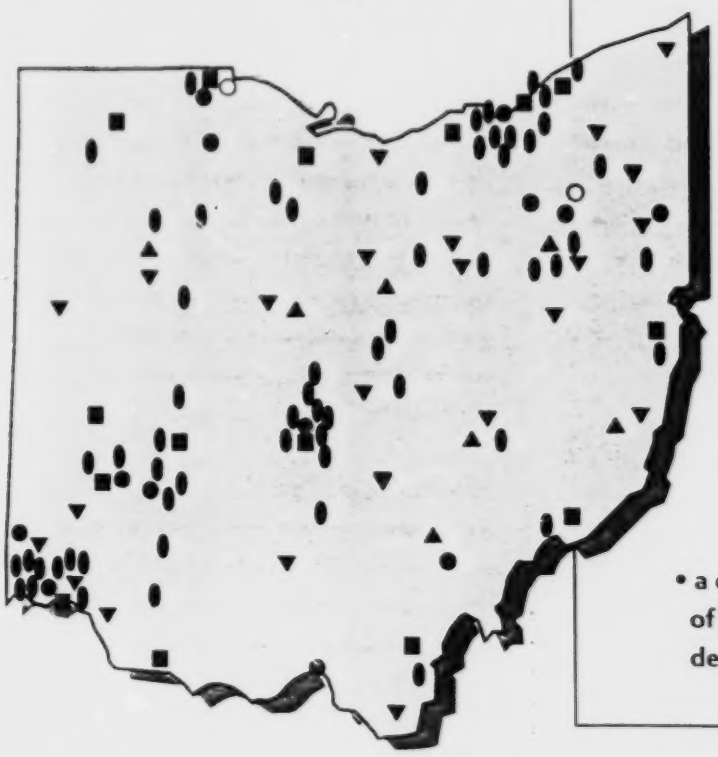
E. Gordon Gee, President, The Ohio State University

Ohio's Resulting Strengths

The values of Ohio's higher education system have resulted in 38 public and 70 independent colleges and universities that represent a rich, diverse resource. Each of Ohio's campuses, both public and independent, provides a wealth of learning opportunities. Some excel in educating undergraduate students. Others focus on specific areas of graduate research or in preparing students for professional fields, such as law, medicine, and business. Still others have a particular mission providing workforce training, technical education, and pre-baccalaureate transfer courses.

The varied strengths of these campuses developed as each faced the challenges and opportunities of a changing world and responded out of a common set of values. What has resulted are four major state-wide strengths:

- **expanding opportunities for access to higher education,**
- **a commitment to the importance of liberal learning,**
- **a strong research and technology development foundation, and**
- **a diverse assortment of workforce development solutions.**



● *13 state universities*
○ *2 free-standing medical schools*
▼ *24 state university regional campuses*
■ *15 community colleges*
▲ *8 technical colleges*
⬮ *70 independent non-profit colleges and universities*

Expanding Opportunities for Access

Although an "education gap" still remains in Ohio, a commitment to broad access is now part of the fabric of Ohio's public and independent colleges and universities. A number of accomplishments demonstrate Ohio's progress in providing access for citizens:

- Historically, Ohio government has demonstrated a strong commitment to providing geographical access for students. Most Ohio citizens now live within commuting distance of at least one higher education option.

- Many campuses serve diverse populations of students from a variety of socioeconomic and cultural backgrounds. Ohio has an above average number of urban universities.

- Outreach programs and support systems for disadvantaged students are in place to give students the best chance possible of successfully continuing their educations.

- Many campuses have made progress in providing evening and weekend classes, as well as distance learning options for students already in the work force.

Photo: Cuyahoga Community College

"A Native American tribe in Minnesota, the Objiwa, had a wonderful tradition. Over a baby's cradle hung what was called a dream net. The dream net was placed there to catch the good, positive dreams that the baby might have, to capture them in the night. When the sun came up the next morning, the dream net would provide the child an everlasting dream, one that did not fade with the night. Our community college is a dream catcher. We help our students understand their potential, recognize their opportunities and realize their goals."

Adapted from 1992 inaugural address of Dr. Jerry Sue Thornton, President, Cuyahoga Community College.

- Financial aid helps students meet the cost of attending a college or university. Also, local two-year campuses provide students a cost-effective and convenient alternative for the first two years toward a bachelors degree.

- Ohio's Student Choice Grant program makes it possible to extend the academic diversity, innovation, and special learning environments of independent colleges and universities to larger segments of the population.

- Community and technical colleges provide a wide range of options to assist members of Ohio's work force in pursuing educational goals by offering technical education, workforce development, and lifelong learning.

Photo: Miami University

A Commitment to the Importance of Liberal Learning

Each of Ohio's public and independent campuses recognizes the importance of liberal learning as the intellectual core of the higher education experience, particularly for undergraduate students. Ohio's strengths in liberal learning are broad:

- The number and diversity of campuses in the state ensures Ohioans a wide selection of formal opportunities for liberal learning, as well as exposure to a variety of cultures and perspectives.

- General education requirements for associate and baccalaureate degrees ensure that every student is exposed to a range of human knowledge and experience: the arts, the humanities, the social sciences, and the natural sciences.

- The state's academic libraries are connected via OhioLINK, ensuring that students have access to the collective academic resources of the state. Internet access and computer resources on campuses are expanding to provide students with access to information and virtual communities throughout the world.

- Ohio campuses are helping students and the general public broaden their perspectives through a variety of lectures, seminars and educational programs in history, science, current events, and the arts.

- Many campuses are experimenting with interdisciplinary approaches to education, undergraduate research projects, and other new types of learning experiences.

Photo: University of Cincinnati

Photo: Ohio State University

Photo: University of Cincinnati

A Strong Research and Technology Development Foundation

Ohio's higher education community includes a rich collection of resources that can be used in meeting the research demands of Ohio's 21st Century economy.

- Ohio's public and independent universities participate in a variety of research partnerships with industry, government, and private organizations throughout Ohio. These partnerships reflect many of Ohio's industry directions and anticipated needs for the future.

- Prospects for the development of new businesses and industries have been greatly improved by research at Ohio universities. Liquid crystals and polymers are two major examples.

- An assortment of research and development facilities are located on or near Ohio campuses and provide many opportunities for faculty and graduate students to work with industry and government researchers.

- Ohio universities play an active role in the state's Thomas Edison Program, which sponsors a number of centers for leveraging the state's technical resources with the private sector. These Edison Centers are stimulating technological innovation and business development in such areas as biotechnology, materials technology, polymers, and advanced manufacturing.

- Ohio is the site of two government aerospace laboratories: Wright Laboratory in Dayton and NASA Lewis Research Center in Cleveland. These two facilities have depended on university partners throughout their histories. The Ohio Aerospace Institute, established by the Board of Regents in 1989, has strengthened ties between these laboratories and Ohio's graduate engineering programs.

- Indicative of the value the Regents place on research is Ohio's Research Challenge program. Established by the General Assembly in 1985, this program provides operating funds for Ohio's public and independent research universities to use as seed money for basic research. The goals are to strengthen abilities to attract sponsored research dollars and foster the development of new research strengths of importance to Ohio's economic development. Research Challenge funds leverage, on average, nearly nine dollars for every dollar invested by Ohio's taxpayers.

Diverse Workforce Development Solutions

Ohio's colleges and universities play a broader and more significant role in workplace education and training than they did just 10 or 20 years ago – from preparing young people for the demands of the job market to offering accessible ways for all employees to keep pace with a rapidly changing and increasingly sophisticated workplace.

- Many of Ohio's public and independent colleges and universities are actively involved in implementing workforce development programs and are working cooperatively with other providers in meeting the state's need for workforce training and education.

- Ohio's two-year campuses have adopted workforce training as an important part of their mission, offering companies a variety of programs not only on their campuses but in the workplace.

Photo: Rubrybchet Community Library

Ohio's 28 Tech Prep consortia link local business, industry, and labor representatives with high school and two-year college faculty. Together, they build academic programs that involve students in rigorous study and related work experience. Tech Prep graduates are thoroughly prepared for technically demanding work and for further collegiate study.

- Ohio's technical and community colleges provide apprenticeship programs, contract training to local businesses, and support for technology transfer. These programs offer technical education in the local workplace and enable business and industry to adopt new technologies by providing them with a trained work force. The high quality of these educational activities has made Ohio's two-year colleges the "preferred" though not exclusive providers for technology education in the workplace.

- Ohio's Tech Prep Program, a federally funded collaborative program between the Ohio Department of Education and the Board of Regents, prepares students for high-skilled technical jobs. Currently, there are 28 consortia involving 43 colleges and universities, 320 school districts, and 500 participating businesses. The consortia offer over 60 high school/college academic programs, and more are under development. Each program provides a sequence of studies beginning in either grade 9 or 11 and continuing through the associate degree.

- Ohio's School-to-Work program provides apprenticeships in Ohio's businesses for high school students and offers college tuition assistance for currently employed workers in

medium to small businesses. Both programs are designed to provide Ohio with a more technologically knowledgeable and prepared workforce.

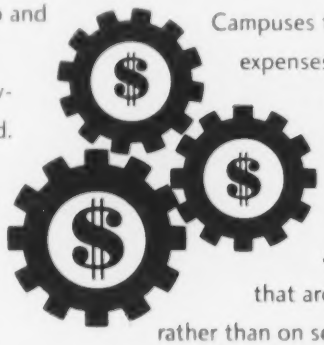
Innovative Funding Mechanisms

State funding for higher education in Ohio is provided through various mechanisms. However, all funding methods and formulas are based on the principle that leadership and decision-making, whenever possible, should be distributed among the individual campuses rather than centralized. The Board of Regents is continually engaged with boards of trustees and campus administrations throughout the state in the planning and development of the funding process, as well as in decision-making.

For example, the Governor and General Assembly have transformed the capital budget process in recent years by returning decision-making to the campuses.

Beginning with the 1997 biennium budget, each campus will have much greater control over capital improvements and greater financial accountability for its decisions. Based on a formula that was developed through a collaborative process, funds will be allocated to each campus for capital improvements.

Campuses that spend capital appropriations exceeding the formula allocation will accept the financial responsibility for operating costs and bear the cost of the resulting debt service by accepting a reduction in future operating subsidies. To "level the playing field," however, campuses with substantial space shortages relative to other campuses will be relieved of a portion of the debt service for their projects.



Campuses that are able to keep capital expenses down without reducing their levels of educational activity will be able to plan a larger operating budget since they will receive plant operation and maintenance subsidies that are based on level of activity rather than on square footage. In addition, campuses that spend fewer capital appropriations than what the formula allocates can keep the difference and use it for capital-related purposes, such as equipment and building maintenance, or transfer the difference to plant funds and use it for future capital improvements.

As this budgeting method is employed through future capital biennia, the collective judgment of Ohio's campuses will become more closely associated with the available operating funds and more strongly reflected in the capital component of the budget.

CURRENT REALITIES: FEWER RESOURCES AND GREATER EXPECTATIONS

Despite its proud history of achievement, significant strengths, and a belief in the power of its values, Ohio's higher education community faces some stark realities. In a time of government budget cuts and corporate downsizing, wages that are not keeping pace with inflation, and a host of other social and economic challenges, the public looks to higher education for solutions.

Today's Expectations for Higher Education

"The higher education community cannot ignore calls for 'accountability' from state legislatures."

The American Association of University Professors

- Today, Ohio's citizens expect a high quality, affordable higher education system that serves all segments of society. They expect colleges and universities to play an active role in helping non-traditional and disadvantaged students to succeed.

- Ohio citizens expect higher education to equip them for competition in a knowledge society.

- Ohio citizens expect educational options that fit their work schedules and family obligations. They expect easy access to opportunities for lifelong learning.

- Government and industry leaders consider university research a powerful "economic engine." They expect universities to be partners in pursuing research areas that will benefit the reputation and economic development of the state.

- Current and future members of Ohio's workforce expect two-year community and technical colleges and university regional campuses to provide technical training and education that will bring them success in the job market.

- Ohio students and their families expect learning experiences that are relevant and rewarding to their lives and careers.

Six hours after Southern State Community College's Portable Academic Computer Training (PACT) lab traveling classroom arrived at Cedar Works, an Adams County manufacturer of wood products, eleven employees, including the two pictured here, had mastered the creation of spreadsheets.

The Legacy of Yesterday's Economy

The expectations Ohioans have for their higher education system are appropriate. However, the state's higher education community faces a severe gap between the broad access and high quality required by these expectations and the constrained resources available for current operations. Because Ohio's years of success in agriculture, mining, and manufacturing delayed the public's realization that the nation's economy was undergoing a major transformation, public investment and participation in higher education did not keep pace with that of other states. Today, citizens, businesses, and public officials, as well as colleges and universities, are paying the price.

Historically Low Participation

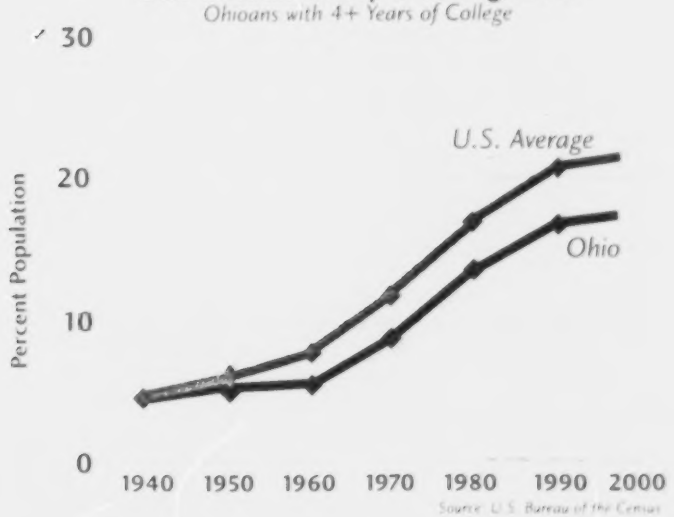
Ohio's economy through much of the 20th Century enabled most adults to find secure, financially rewarding employment without higher education. As a result, Ohio has been falling significantly below the national average in the number of adults with a college education. In 1940, Ohio's population nearly mirrored the national average for adults who had a college degree. In 1950, Ohio was 5 percent below the national average in the number of college educated adults. By 1993, Ohio had dropped to 12 percent below the national average in adults over the age of 25

"A businesslike, consumer-oriented approach has arrived on Ohio's campuses. This move – urged by the Ohio Board of Regents – is smart planning for a state lagging sadly behind in producing college graduates."

The Cincinnati Post

Ohio's Education Gap is Getting Worse

Ohioans with 4+ Years of College



Source: U.S. Bureau of the Census

EDUCATIONAL ATTAINMENT BY STATE

Percent of Adult Population Having Completed At Least a Given Level of Education (Twenty Most Populous States)

HIGH SCHOOL GRADUATE			HIGH SCHOOL GRADUATE/ SOME COLLEGE, NO DEGREE			DROPOUTS AGE 15-19		
Rank	State	Percent	Rank	State	Percent	Rank	State	Percent
1	Washington	83.7	1	Washington	55.8	1	Minnesota	6.4
2	Minnesota	82.5	2	California	53.9	2	Wisconsin	7.1
3	Massachusetts	79.9	3	Maryland	50.3	3	Massachusetts	8.5
4	Wisconsin	78.6	4	Massachusetts	50.2	**4**	**Ohio**	**8.9**
5	Maryland	78.4	5	Minnesota	49.5	5	Pennsylvania	9.1
6	Michigan	76.7	6	Virginia	48.5	6	New Jersey	9.6
7	New Jersey	76.6	7	Texas	46.7	7	New York	9.9
8	Illinois	76.3	8	Illinois	46.3	8	Virginia	10.0
9	California	76.2	9	New Jersey	45.5	9	Michigan	10.0
10	Indiana	75.7	10	New York	45.3	10	Illinois	10.6
11	**Ohio**	**75.6**	11	Michigan	44.4	11	Washington	10.6
12	Virginia	75.1	12	Florida	44.3	12	Maryland	10.9
13	New York	74.8	13	Wisconsin	41.5	13	Indiana	11.4
14	Pennsylvania	74.6	14	Georgia	41.3	14	Missouri	11.4
15	Florida	74.4	15	North Carolina	41.0	15	North Carolina	12.5
16	Missouri	73.8	16	Missouri	40.7	16	Texas	12.9
17	Texas	72.3	**17**	**Ohio**	**39.3**	17	Tennessee	13.4
18	Georgia	70.9	18	Indiana	37.5	18	Georgia	14.1
19	North Carolina	70.0	19	Tennessee	37.0	19	California	14.2
20	Tennessee	67.0	20	Pennsylvania	36.0	20	Florida	14.3
	United States	75.2		United States	45.2		United States	11.2

Source: Statistical Abstract of the United States: 1993, Table 235

with a baccalaureate degree – even though more adult Ohioans hold degrees than ever before.

Although the percentage of high school graduates in Ohio has consistently ranked above the national average, only 39.3 percent of Ohio adults have been to college, compared to 45.2 percent nationally. While this gap of 5.9 percentage points may not seem great, when applied to Ohio's adult population of nearly 7 million, it translates into a gap of over 400,000 Ohioans. In other words, if the percentage of Ohio's adults that had been to college matched the national average, the state would have over 400,000 more adults with the college training needed to meet the demands of employers in need of sophisticated skills.

Below Average Per Capita Income

In the 1950s, when participation in higher education began declining in Ohio, it did not signal a serious problem. Per capita income in 1955 was 10 percentage points above the national average, and jobs were plentiful. However, the world has changed dramatically since the 1950s. Employment in steel mills and automobile plants has declined significantly. In the 1980s alone, Ohio's manufacturers eliminated more than 170,000 jobs. New jobs required increasingly greater levels of skill.

The result was that Ohio's per capita income stopped growing in the 1980s and by 1995 had fallen to six percentage points below the national average. This swing of 16 points in per capita income, relative to the national average, equates to a cumulative loss in today's dollars of about $2,500 annually for every man, woman, and child in the state – a total in excess of $27.5 billion.

In part, this decline is related to relatively low levels of educational attainment by Ohioans.

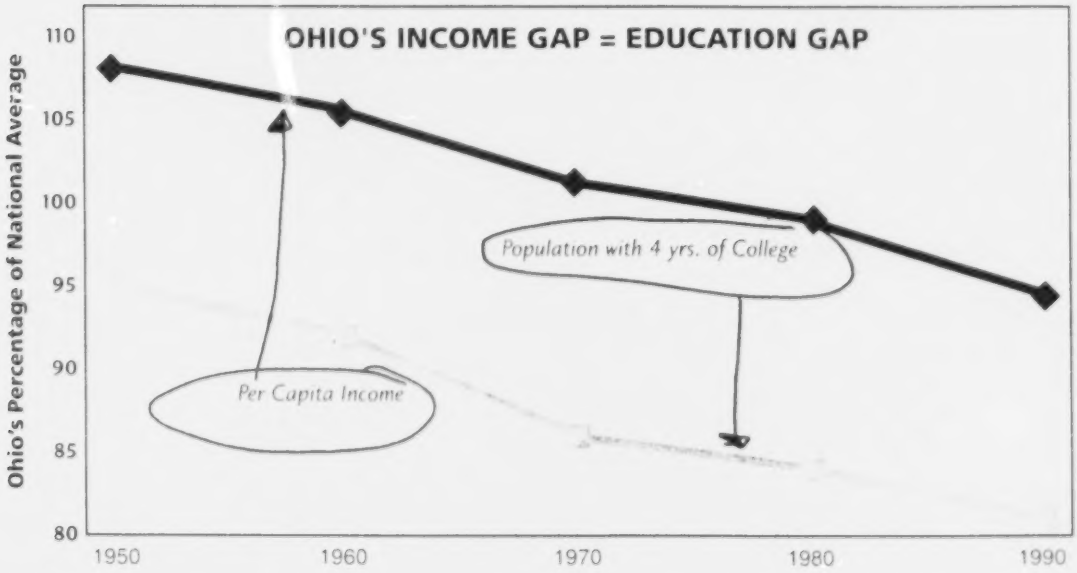
National economic figures show that although gains in earnings for college graduates are not as rapid as they used to be, they are increasing while earnings for those without college education are declining significantly.

A recent national study indicates that about $590 is added to the state's per capita income for every one percent gain in the percentage of the population 25 years and older with baccalaureate degrees. For Ohio, this means that only a one percentage point gain in the number of adults with baccalaureate degrees would add an additional $6.5 billion to the state's economy each year and increase the state revenues generated annually by a minimum of $325 million without an increase in taxes. The fact that Ohio is 2.4 percent below the national average in the percentage of its population with baccalaureate degrees means $15.7 billion is lost annually in personal income. If Ohio was at the national average, an additional $799 million would be generated in tax revenues. This increase in state revenues could be used to benefit all Ohio citizens.

COMPARISON OF PERCENTAGE OF POPULATION 25 & OVER WITH A COLLEGE DEGREE & GROWTH IN PERSONAL INCOME FROM 1978-94

State	Percent Degrees	Income Growth
Connecticut	26.0	28.1
Massachusetts	26.0	27.8
Vermont	24.0	28.1
New Jersey	24.0	27.9
New Hampshire	24.0	31.9
New York	22.0	23.2
Minnesota	21.0	13.3
Illinois	20.5	11.2
Nebraska	18.5	19.1
Maine	18.5	25.0
Pennsylvania	18.0	17.5
OHIO	**17.5**	**8.9**

Source: On the Money, March 1995



Source: U.S. Bureau of the Census

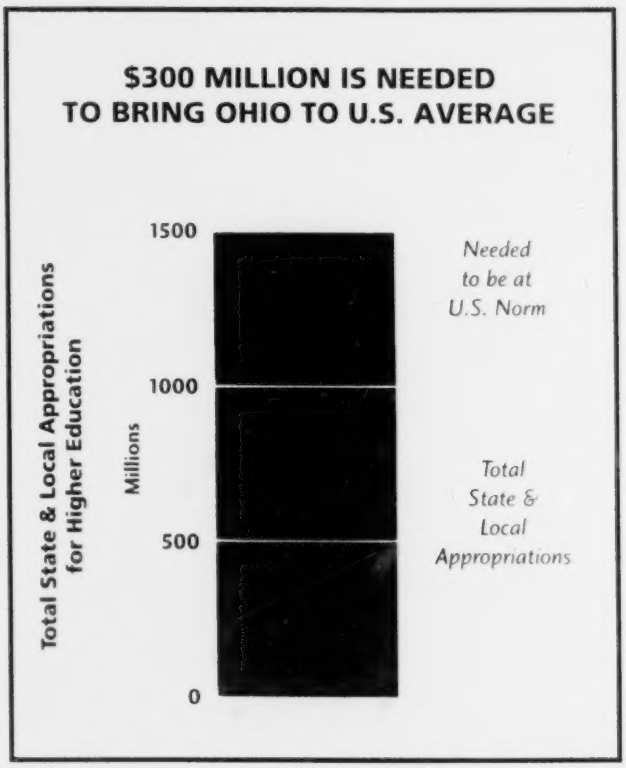
Note:
Lines were mislabeled.
Green line = percapita income
Grey line = population w/ 4 years of college

39

Insufficient Public Investment in Higher Education

The nature of Ohio's past economic prosperity created a culture that did not place a high priority on higher education. Therefore, over the last 30 years, public funds available to support higher education in Ohio have been well below the national average. The economic problems of the early 1990s – partly caused by the "education gap" – further weakened the funding base for colleges and universities.

Because state-provided funds in Ohio are among the lowest in the country, tuition in Ohio ranks among the highest in the country. Ohio students pay about $900 more per year on average to make up for this lack of support. The state's high tuition policy is one factor that restricts student access to a quality education at an affordable price. To bring Ohio up to the national average in state and local support for public colleges and universities would take a $300 million annual increase. With a commitment to move Ohio toward the national average, the Board of Regents has been, and will continue to be, a strong advocate for increasing the state's investment in higher education.



Source: Calculated from State Profiles, 1993 per Halstead Ohio ($1.18 billion = appropriations-research, agriculture & Medicine $)

FUNDING FOR HIGHER EDUCATION: WHERE DOES OHIO STAND?

BECAUSE PUBLIC SUPPORT IS LOW

State & Local Appropriations/FTE

Rank	State	1993-94
1	Alaska	$9,659
2	Dis. Columbia	$5,287
3	Hawaii	$8,284
4	Connecticut	$6,596
5	Wyoming	$6,412
6	New Jersey	$5,657
7	Maine	$5,482
8	N. Carolina	$5,456
9	New York	$5,413
10	New Mexico	$5,290
11	Wisconsin	$5,263
12	Iowa	$4,981
13	Idaho	$4,970
14	Nevada	$4,906
15	Georgia	$4,785
16	Florida	$4,717
17	Minnesota	$4,642
18	Washington	$4,590
19	Pennsylvania	$4,583
20	Illinois	$4,457
21	Michigan	$4,448
22	Massachusetts	$4,416
23	Missouri	$4,372
	US Average	**$4,362**
24	Kansas	$4,281
25	Oklahoma	$4,277
26	Texas	$4,260
27	Tennessee	$4,259
28	Rhode Island	$4,238
29	Indiana	$4,223
30	Utah	$4,219
31	Delaware	$4,194
32	Arkansas	$4,187
33	Oregon	$4,173
34	Arizona	$4,097
35	California	$4,082
36	Nebraska	$4,015
37	Maryland	$4,008
38	North Dakota	$3,764
39	**Ohio**	**$3,575**
40	S. Carolina	$3,555
41	Kentucky	$3,553
42	South Dakota	$3,473
43	Montana	$3,465
44	Virginia	$3,389
45	Alabama	$3,339
46	Louisiana	$3,294
47	Mississippi	$3,157
48	Colorado	$3,099
49	West Virginia	$2,917
50	New Hampshire	$2,636
51	Vermont	$2,249

STUDENT TUITION IS HIGH

Net Tuition/FTE

Rank	State	1993-94
1	Vermont	$8,142
2	Delaware	$5,276
3	New Hampshire	$4,548
4	Pennsylvania	$4,055
5	Rhode Island	$3,940
6	Michigan	$3,577
7	Connecticut	$3,165
8	Maine	$2,929
9	**Ohio**	**$2,883**
10	Missouri	$2,820
11	Colorado	$2,792
12	Indiana	$2,771
13	Virginia	$2,705
14	Maryland	$2,705
15	Wisconsin	$2,613
16	Massachusetts	$2,577
17	Iowa	$2,532
18	Louisiana	$2,338
19	S. Carolina	$2,312
20	New Jersey	$2,302
21	South Dakota	$2,295
22	West Virginia	$2,139
23	Oregon	$2,127
24	New York	$2,080
25	Alabama	$2,037
26	Minnesota	$2,037
27	Mississippi	$2,001
	US Average	**$1,999**
28	North Dakota	$1,967
29	Montana	$1,912
30	Arkansas	$1,902
31	Arizona	$1,812
32	Alaska	$1,800
33	Kansas	$1,788
34	Tennessee	$1,728
35	Kentucky	$1,668
36	Georgia	$1,629
37	Utah	$1,592
38	Wyoming	$1,555
39	Nebraska	$1,529
40	Florida	$1,458
41	Texas	$1,422
42	Washington	$1,387
43	North Carolina	$1,339
44	Oklahoma	$1,328
45	New Mexico	$1,248
46	Illinois	$1,177
47	Dist. Columbia	$1,100
48	Nevada	$1,032
49	Hawaii	$986
50	California	$986
51	Idaho	$920

JUST TO KEEP OHIO NEAR THE AVERAGE

Appropriations + Tuition Per FTE

Rank	State	1993-94
1	Alaska	$11,459
2	Vermont	$10,391
3	Connecticut	$9,761
4	Delaware	$9,470
5	Dist. Columbia	$9,396
6	Hawaii	$9,270
7	Pennsylvania	$8,638
8	Maine	$8,411
9	Rhode Island	$8,178
10	Michigan	$8,025
11	Wyoming	$7,967
12	New Jersey	$7,959
13	Wisconsin	$7,876
14	Iowa	$7,513
15	New York	$7,493
16	Missouri	$7,192
17	New Hampshire	$7,184
18	Indiana	$6,994
19	Massachusetts	$6,993
20	N. Carolina	$6,795
21	Maryland	$6,713
22	Minnesota	$6,679
23	New Mexico	$6,538
24	**Ohio**	**$6,458**
25	Georgia	$6,414
	US Average	**$6,361**
26	Oregon	$6,300
27	Florida	$6,175
28	Virginia	$6,094
29	Arkansas	$6,089
30	Kansas	$6,069
31	Tennessee	$5,987
32	Washington	$5,977
33	Nevada	$5,938
34	Arizona	$5,909
35	Colorado	$5,891
36	Idaho	$5,890
37	S. Carolina	$5,867
38	Utah	$5,811
39	South Dakota	$5,768
40	North Dakota	$5,731
41	Texas	$5,682
42	Illinois	$5,634
43	Louisiana	$5,632
44	Oklahoma	$5,605
45	Nebraska	$5,544
46	Montana	$5,377
47	Alabama	$5,376
48	Kentucky	$5,221
49	Mississippi	$5,158
50	California	$5,068
51	West Virginia	$5,056

Source: State Profiles: Financing Public Higher Education: 1978 to 1994, Research Association of Washington, October 1994

The Need for New Perspectives

Because of the relationship between higher education and the economic prosperity of the state, everyone – Ohio's political leaders, business and industries, and all of its citizens – is a "stakeholder" in the future of the state's colleges and universities.

It is important that colleges and universities provide stakeholders with a higher education system that both produces significant, tangible results and uses tax and tuition dollars efficiently and effectively. In some instances, this means acknowledging the market forces that drive higher education and serving the needs that the public views as most important.

It is equally important that stakeholders cultivate a more global and long-term view of higher education. Many of the problems with funding and educational attainment that exist today, as well as the resulting economic problems, are the consequences of decision-making that took place decades ago – decision-making that brought short-term success but failed to anticipate the long-term effects on the state as a whole.

The higher education community and its stakeholders can set a more effective course for the future by looking beyond current, immediate realities and thinking about the implications of changes that are just beginning to occur today. The effects of decisions being made today will occur in a dramatically different future.

Photo courtesy of The Morning Journal, Lorain, Ohio

Lorain County Community College President Roy Church announces that ten Ohio colleges and universities have joined together for the University Partnership on LCCC's Elyria campus. Some universities will bring entire degree programs while others may offer courses and programs. Students who earn an associate's degree will be able to remain on the LCCC campus to earn their bachelor's degrees. The State of Ohio provided initial funding and Lorain County voters approved a 1.2 mill, 10-year levy for the University Partnership implementation. Approximately 200 students are enrolled Fall 1996 and plans are under way for the University Partnership facility, scheduled to open in Fall 1998.

CHALLENGING TIMES: OHIO IN TRANSFORMATION

A century ago, those who surveyed the future of Ohio believed that working toward the goal of an eighth-grade education for all citizens was sufficient. Then, most Ohioans saw factories, steel mills, and coal mines as the pathways to a better life. These industries created the jobs that raised the standard of living. They produced much of the wealth needed to build hospitals and schools, create modern cities, and enrich community development. In many ways, they shaped the way of life and philosophy of the time.

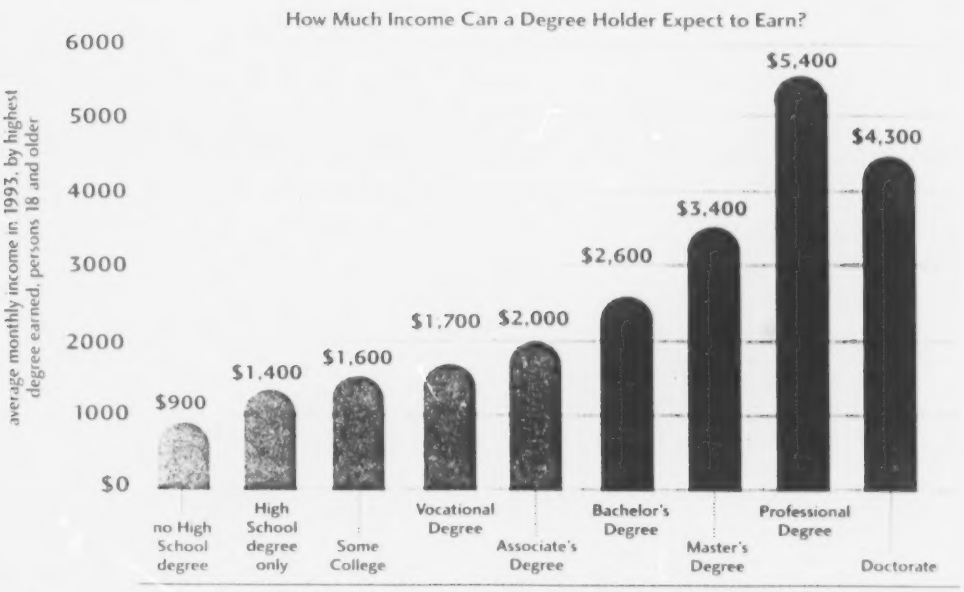
From the perspective of this "smokestack" economy, Ohio's continued economic growth depended on investments in new machinery and more efficient methods of mass production. Job security for individuals depended on following the rules, working fast, and working hard. The growth of Ohio's economy, literally, was in the hands of its workers.

Success in 21st Century Ohio will be grasped not by strong hands but by strong minds. The future abilities of individuals, organizations, and nations to survive and thrive will depend largely upon their abilities to generate, apply, and share knowledge.

In the 21st Century global economy, new knowledge will be the source of solutions and innovations that can enhance the quality of life for citizens. Businesses and industries in a knowledge society will succeed based largely on the discoveries of basic and applied research and the ability of the workforce to learn and innovate.

Photo: Kent State University

Middle and high school science and math students and their teachers have Internet access to collaboratively developed experiments and lessons through Kent State University's Science and Math on the Net (SAM-Net) program. Encouraging effective science education at all levels is one of the missions of the Center for Advanced Crystalline Optical Materials (ALCOM), a National Science Foundation Center for Science and Technology. ALCOM is a consortium of Kent State University, Case Western Reserve University and the University of Akron. The Liquid Crystal Institute at Kent State is its hub.



Source: Inter-University Council of Ohio, adapted from the Spring 1996 edition of *Priorities*, published by the Association of Governing Boards.

In the knowledge economy, college education will be a necessity for Ohioans who desire steady employment, decent incomes, and career advancement. Furthermore, the higher incomes these citizens will realize through education will generate more resources for the state and its local communities to use in serving broad needs, enhancing the quality of life, and solving current and future problems for all citizens.

In the 21st Century, educated Ohioans will have greater opportunities to enjoy the vast cultural richness of a global society and exert a positive influence on the decisions of government. An educated citizenry, possessing broad knowledge of the culture that has been built and the ability to understand the complexities of the transformation that is occurring, will be Ohio's most valuable resource as it faces the challenging social, economic, political, scientific, and ethical questions of the next century.

"Education will become the center of the knowledge society and the school its key institution...the performance of the schools will be of increasing concern to society as a whole, rather than being individual professional matters that can safely be left to 'educators.'"

Peter Drucker, Atlantic Monthly

A strong 21st Century economy and society will consist of many elements:

- The evolution of a state-wide economic community that acts aggressively and strategically in the global marketplace, that uses the world-wide communications infrastructure to acquire and disseminate knowledge, that forms collaborative partnerships and alliances to address critical problems and opportunities, and that participates in meeting the needs of all Ohio citizens.

- The encouragement of qualitative growth, efficiency, and strength in existing enterprises of all kinds from large and small businesses to non-profit agencies and public service organizations.

- The growth of new industries and businesses that focus on the research and development of advanced technologies, important new applications for existing technologies, and the integration of technologies to provide new solutions.

- An increase in the number of companies that produce high quality, competitively priced goods through the use of advanced materials and technology, innovative design, efficient production processes, and well-paid, highly skilled human labor.

- The growth of many high value-added service industries and businesses that continually identify new needs and opportunities, that develop multi-faceted relationships with their customers, and that turn ideas and knowledge into marketable solutions.

- High performance organizations to deliver quality, cost-effective services in health care and other critical areas of public service.

- Knowledgeable leaders and citizens whose decisions and actions will ensure continued growth and wise use of resources.

Successfully creating all these elements of a 21st Century economy depends upon a partnership that includes Ohio's higher education community, its business and industry, its government, and its citizens. Higher education benefits from a successful partnership by gaining competitive advantages in an educational marketplace and expanding its sources of funds. Higher education best contributes to the partnership by accepting accountability for access and affordability, educational quality, high performance in research and development, and service to industry and business.

Challenges of Broad Access

If Ohio is to realize the benefits of improved educational attainment, higher education must address all the dimensions of expanding access. Success in providing equal opportunities for admission and enabling citizens to enter college despite their geographical locations, physical disabilities, and financial status has been significant.

However, to increase educational attainment, these efforts need to continue, along with recognition and removal of two additional types of access barrier. For many students, limited time is a major obstacle to higher education. For many others, there are psychological and cultural obstacles that must be overcome. Improving access for these students will mean greater flexibility and creativity on the part of campuses.

Reaching Out to the Traditional Labor Force

Most "front-line workers" in the future will be technicians or information specialists who will be expected to diagnose and solve complex problems, use advanced tools and methodologies, and manage their own work. Most will need to have, at the minimum, an associate degree from a technical or community college or university regional campus.

Many of the students entering two-year colleges in hopes of securing these jobs will come from Ohio's current unskilled and semi-skilled workforce. In many cases, they will need significant developmental and even remedial education. In addition, many of these new students will be pursuing higher education while struggling with the difficulties of life in the low-wage sector of the economy: long work hours, inflexible schedules, frequent difficulties with child care and transportation, and continual financial difficulties.

Financial aid, child care, developmental courses, and other types of assistance will be critical to the success of many of these students. In addition, due to the competing demands of necessary employment and family responsibilities, Ohio campuses will need to be more flexible regarding the abilities of students to be physically present at regularly scheduled times.

Overcoming Disadvantages

Ohio's future economy also will create a need for higher education to serve a greater percentage of each year's high school graduates. As a result, children who currently are growing up in poverty and attending poorly equipped schools will be encouraged to break the negative cycle through education.

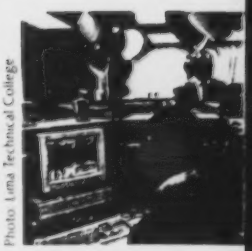


Photo: Lima Technical College

In the two years since AT&T donated 20 computer workstations to launch Lima Technical College's Alternative Learning Systems Center, more than 1,000 students have taken advantage of new instructional options. Self-paced, CD-ROM-based courses in Office Administration and Engineering Technology are very popular, as is an Internet-based English composition course. Additional distance learning options are also available.

However, providing affordable access to these students will be only the beginning. Increasing numbers of students at Ohio's campuses, particularly campuses that serve large rural and inner city populations, will need help in overcoming disadvantages they encountered in their earlier years of schooling. In addition, the state's schools and communities will need help as they work to improve their abilities to prepare future generations for higher education.

Recruiting Educationally Disadvantaged Students

The recruitment and retention of educationally disadvantaged students from minority groups and rural communities of the state is essential to creating an educated work force. Much needs to be done if more disadvantaged students are to take their rightful place in the knowledge age. Ohio currently ranks 30th nationally in the proportion of baccalaureate degrees awarded to African-Americans and is 43rd nationally in the percentage of its African-American population that has completed a college education. The number of students from rural areas enrolled in higher education is 10 percentage points below the state average and nearly 20 percentage points below the average for the nation.

Increased outreach efforts are needed to counteract the strong negative peer pressure that undermines high school achievement for many inner city students. In addition, Ohio campuses will need to encourage minority students to continue their studies until degree completion by creating a climate that is welcoming to minorities and conducive to their learning. Colleges and universities will need to increase their assistance to help disadvantaged students overcome the cycle of living in poverty, attending poorly equipped schools, and attaining low levels of educational achievement. Motivating students to achieve higher levels of education is an important goal for all Ohioans but especially for those living in areas where educational attainment and resources are minimal. Achieving this goal will require state support and cooperation at the local and regional levels between colleges, universities, and local public schools.

Access to quality child care is as important as transportation and books for many of today's college students who are raising children at the same time they are pursuing career and degree goals.

It is recognized that the special attention and services necessary to support the developmental and remedial needs of Ohio's disadvantaged and under-represented populations is not without cost. The short term investment, however, creates the potential for a long-term return to the economy of the state and to the quality of life of its citizens.

Supporting Lifelong Learning

Creating an educated workforce in a global knowledge economy also will mean a demand for a vast range of lifelong learning opportunities. Ohio's colleges and universities will need to serve greater numbers of employees seeking advanced degrees or entering new specialized fields of knowledge. Because a larger percentage of the student population will be people who already have started to advance in their careers, living on campus or commuting long distances will be impossible. At the same time, some of these students will have highly specific educational needs that would be best met by campuses outside their local areas. To serve these students, campuses will need to find more flexible alternatives, including the use of communications technologies.

New Quality Challenges

A future-oriented economy will need much more from the higher education community than specialists and experts. In all sectors of the economy, Ohio will need creative people who can bring completely new business ideas to life, entrepreneurs who can identify unmet needs and develop new markets, and a workforce that continually pursues quality and innovation. Higher education at all levels will need to prepare students for a lifetime of change, complex new challenges, and continued learning.

Ohio's public and independent colleges and universities are embracing the concept of lifelong learning. They are accommodating the needs of older adults by providing personal development and enrichment in credit and non-credit courses, as well as programs for workforce education and re-education. A few are even moving beyond the traditional view of lifelong learning by developing a model of perpetual learning in which the application of learning to work and personal development are integrated as one and offered at the computer desktop, at home or in the work place. The goal is to ensure lifelong employability for learners who never become unskilled in the work place.

"It is time for American higher education to determine what its business is. The University is a center to 'harness the intellect.' That is our business. Teaching and research are only outcomes of this business."

Joseph A. Steger, President, University of Cincinnati

Ohio's higher education community is responding to these quality challenges by reaffirming some fundamental attributes of quality education and by adopting the new learning approaches and technologies that are emerging on campuses throughout the nation.

The Value of Liberal Learning

In an increasingly sophisticated and technologically changing world, successful people will be those who frequently draw upon knowledge they gained from the liberal learning experiences that constituted the intellectual core of their degree programs. The abilities these learning experiences cultivate – inquiry, logical reasoning, conceptual thinking, and self-expression – will be essential.

Future workers will need not only new knowledge and technical skills but also the ability to think critically and creatively in solving human problems. They will need to evaluate the development of new technologies, products, and services in light of social and ethical issues. They will also need the interpersonal skills and world knowledge to work successfully in the increasingly global and culturally diverse human environment of the next century.

The future will place high premiums on people who can deal with uncertainty, who feel comfortable with ambiguity and abstraction, who are technically competent and who are prepared and motivated to continue learning. Liberal learning prepares students to master a future filled with uncertainty, one in which they may have numerous jobs and several careers. Liberal learning supports a vision of the future in which Ohioans are better prepared to face the challenging social, economic, political, scientific, and ethical questions of the next century.

Photo: University of Cincinnati

Human resource development in 21st Century Ohio will extend far beyond the workplace. With linkages of technology, transportation, and the media bringing broader perspective to their lives, citizens today are developing new interests and becoming more involved in social causes, more politically active, and more aware of important global issues. Ohio's colleges and

universities can provide the lifelong learning experiences that result in informed citizens who will enjoy life and help to create a better world.

Liberal learning also will grow in value as the marketplace becomes increasingly global. Because many of Ohio's knowledge workers also will be working in multinational, multicultural settings, the ability to speak a language and understand the traditions and norms of different cultures will come to represent not only a life-enriching asset but also a competitive advantage. This increasing globalization of business will create a need for more colleges and universities to expand the international dimensions of learning, not only in business education, but across the curriculum.

Photo: Miami University

Photo: Ohio State University

A Broader Definition of Scholarship

A broader definition of scholarship is becoming more widely accepted throughout higher education. Encouraged by the late Ernest Boyer of the Carnegie Foundation, this new definition highlights not only the discovery of new knowledge that takes place in the process of faculty research but also the integration, application, and sharing of knowledge. Frank Newman, President of the Education Commission of the United States, envisions the emergence of different "pyramids of prestige" for American universities. Instead of viewing the status of the comprehensive research university as the ultimate goal, successful colleges and universities will strive to become the very best of their kind.

"The term scholarship should be given a broader, more capacious meaning that brings legitimacy to the full scope of academic work. The work of the professoriate can be seen as having four distinct, yet interrelated functions: the scholarship of discovery, the scholarship of integration, the scholarship of application, and the scholarship of teaching."

Ernest Boyer, former Director, Carnegie Foundation for the Advancement of Teaching

Photo: Wright State University

Wright State University President Harley E. Flack (left) and Provost John Fleischauer present Neal Rote (far right) with the Wright State University Presidential Award for Faculty Excellence as "Outstanding Faculty Member of the Year."

As a broader definition of scholarship becomes more widely accepted, research will become an important part of undergraduate learning on campuses. Linking teaching with research is an excellent way to optimize student learning. Working directly with faculty in research can challenge undergraduates to engage in sustained work on problems that enhance their abilities to explore, analyze, define, and communicate their own solutions. It can convey to them the importance of intellectual inquiry and the excitement of discovery. It may be one of the best ways to prepare them for the challenges they will face in their careers and their lives.

A Shift From Teaching to Learning

Higher education is shifting away from teacher-centered classroom experiences and toward student-centered learning experiences. In the new learning models, students must understand and accept responsibility to be active participants in the learning process rather than the passive recipients of information and knowledge. They are expected to collaborate but also to be more autonomous and to realize the quality and outcomes of their education are directly linked to their efforts to learn. With these new models, the emphasis is shifting from the productivity of faculty to the productivity of students, from styles of teaching to styles of learning, from the disciplinary interests of faculty to the learning needs of students.

Ohio's campuses will need to find innovative ways to create this shift that also result in high productivity.

TEACHING AND LEARNING

	TRADITIONAL MODEL	NEW PARADIGM
Purpose:	Transition of Factual Information	Finding and Developing Knowledge
Method:	Lecture, Question and Answer	Inquiry, Contextual Learning, and Applied Methods
Context:	Traditional Academic Subjects	Integrated Curriculum
Organization:	Classroom Isolated from the World and Work	Connected Electronically to Community, Work, and World
Evaluation:	Testing of Factual Information	Students' Learning Assessed through Performance and Problem-solving
Role of Teacher	Transmitter of Knowledge	Facilitator, Coordinator, and Knowledgeable Guide in Finding/Developing Knowledge
Role of Student:	Passive Recipient of Factual Information	Actively Engaged in Learning

According to University of Cincinnati President Joseph A. Steger, "Pedagogy is not simply teaching. It is a commitment to examining what is taught, how it is taught, and whether anyone really learns anything." In 1994, the University of Cincinnati launched a major "Pedagogy Initiative" which now includes a collectively-bargained $4.5 million investment in a faculty development program. Hundreds of faculty have sought assistance to transform their teaching through technology. Long-term support for the effort is now assured through an endowment created this year.

Innovative, Productive Use of Information Technology

An array of new information technologies is changing perceptions about where, when, and how learning takes place. The potential now exists to give students powerful new tools for meeting the goals of the curriculum and to energize classroom instruction through engaging new technological aids. It is now possible to meet students' individual needs through multimedia learning modules and to provide specialized courses to students at off-campus locations, including homes and work sites, through distance learning technologies.

In incorporating new technologies, colleges and universities and their faculties will be challenged to balance innovation and productivity. They will need to explore the capabilities of technology that encourage student-centered models of learning. They will need to be equally innovative in finding new investment, new incentives for innovation, and new models for using faculty time and institutional resources wisely. Although it will not be a panacea for cost issues in higher education, technology will surely make possible more creative and effective delivery of educational services, and it will help to extend educational opportunities to those citizens who are presently under-served.

The Ohio Library and Information Network (OhioLINK): A resource sharing success story

Ten years ago, state university libraries in Ohio were rapidly running out of shelf space. In 1986, the aggregate cost of capital budget requests for new, renovated and additional library facilities totaled nearly $1 billion.

Recognizing that a library expenditure of that magnitude was out of the question, the Ohio Board of Regents convened a Library Study Committee to explore alternatives. The two-part solution developed by the study group was supported by the Regents and funded by Ohio's elected officials.

Compact shelving was installed in existing libraries, and infrequently used materials were moved off-campus to regional storage facilities shared by several campuses. Five regional book depositories have since been built across the state.

In addition, an electronic network linking the catalogues of the state's major academic

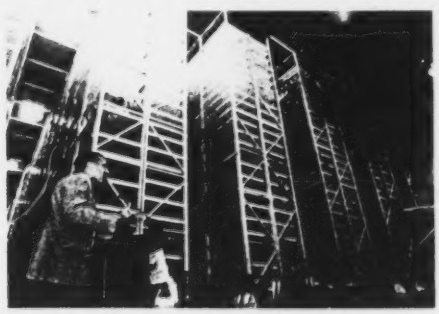
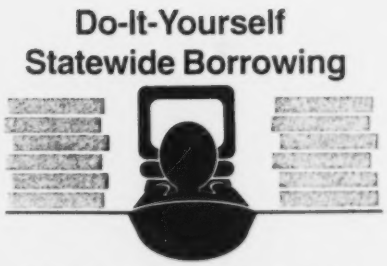


Photo J.D. Pooley, Sentinel Tribune

Bowling Green State University President Sidney A. Ribeau was one of the officials on hand for the Northwest Ohio Regional Book Depository dedication ceremonies.



libraries and providing on-line access to the resulting collection has been built. That network – the Ohio Library and Information Network (OhioLINK) – has exceeded every performance expectation.

Today, OhioLINK is a consortium of 52 libraries from Ohio universities, colleges, community colleges and the State Library of Ohio. All OhioLINK services are available through the World Wide Web, making immediate electronic access possible for the more than 500,000 Ohioans who are currently recognized as OhioLINK patrons. These patrons can access OhioLINK through library-based workstations or from any computer with an Internet connection.

As of October, 1996, OhioLINK's catalogue includes 23 million items. OhioLINK users also have access to 57 research databases, the full text of hundreds of journals and many additional research tools.

Currently, Ohio's campuses are uneven in their technical capacities. Some have made significant investments in technology while others are only beginning. Ohio's higher education system needs a forward looking, coherent, and evenly distributed technology infrastructure to meet both student and individual campus needs as well as statewide economic and research needs.

In incorporating new technologies, institutions and faculty also will be challenged to balance innovation and productivity. They will need to be innovative in testing new approaches to teaching students, avoiding uses of technology that reinforce the old teacher-centered model of learning. They will need to be equally innovative in finding new investment strategies, new incentives for innovation, and new models for using faculty time and institutional resources wisely.

Maximizing Research and Development Strengths

In a 21st Century economy, where generating and transferring knowledge are essential, Ohio's public and independent colleges and universities will become central to the competitiveness of Ohio companies and the state's ability to attract new businesses and industries. Research programs in all areas of higher education will be challenged to leverage their strengths through greater awareness of needs and opportunities and greater collaboration.

Different Sources of Funding

Since research funding is likely to remain constrained and the current approach of focusing support on applied research that meets national needs is likely to continue, universities will need to seek matches between their existing research strengths and the needs of the state and national economy. Each will need to nurture selected new research that offers potential solutions to 21st Century needs and position itself to respond quickly to new funding opportunities and research breakthroughs. In addition, Ohio's universities will have opportunities to become more self-sufficient by licensing the technologies they develop or forming new high tech companies.

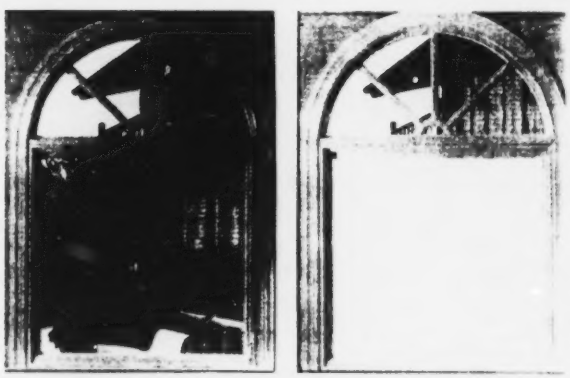
Technology Transfer

The research and development capabilities of Ohio's colleges and universities can play an important role in helping some existing Ohio businesses make the transition to a knowledge economy. Significant infusions of knowledge and ideas are what many businesses will need to realize their potential. Ohio's colleges and universities can help by more actively facilitating the transfer of technology to these companies or by forming research partnerships with them. In addition, the diverse range of research areas pursued by colleges and universities can be valuable in finding practical solutions to a wide range of business problems that accompany the introduction of new high tech products.

Collaboration

Because the research needs of businesses and industries are growing more complex, many new businesses will choose their locations in states that offer a varied collection of research strengths. To ensure that Ohio is an attractive location for new businesses, universities and researchers will need to view themselves as members of a state-wide network – addressing complex research challenges through collaborative, interdisciplinary approaches and the sharing of resources.

Finally, with advances in communications technology, more opportunities will emerge for collaboration of a national and international scope. Ohio's colleges and universities will be asked to share knowledge and expertise that will help the state, its regions and cities, and its businesses to formulate strategies and tactics that are suitable to a global economy.



Photos courtesy of Marvin Windows & Doors

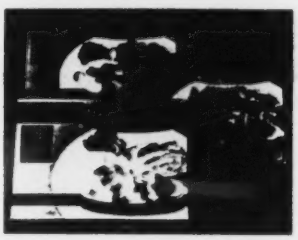
Polymer dispersed liquid crystals were invented at Kent State University in 1983. A major application of these materials is in "switchable windows," which change from clear to opaque at the flip of a switch. This technique has been licensed to the 3M Corporation which is now manufacturing the windows in cooperation with Marvin Windows.

Technology Transfer: HeaterMeals

During fiscal year 1996, The University of Cincinnati earned more than $2.2 million through patents and licenses of technology developed through UC's research program. These funds are used to support the University's educational mission. The University ranks first in Ohio and 22nd in the U.S. among colleges and universities on patent and license income. Last year, UC filed 52 invention disclosures, 14 new patent applications and was awarded 5 new patents.

The story of HeaterMeals, a product that has had extensive military use and will soon be familiar to consumers everywhere illustrates the way scholarship and commercial enterprise can go hand-in-hand. Research at UC on fast-corroding alloys in the 1980's led to the development of a flexible pad that gives off heat on exposure to water. UC obtained a patent in 1983 and licensed it to a company now named HeaterMeals.

HeaterMeals' success will bring hot meals to people everywhere, prosperity to the company's shareholders, royalties to UC, profits to the stores, and tax dollars to local, state, and federal governments.



A Story of Changing Times...

The Ohio Agricultural Research and Development Center (OARDC) is the research arm of the The Ohio State University's College of Food, Agricultural and Environmental Sciences. Its history reaches back more than 100 years, and includes an 1892 move, by wagon train, from Columbus to Wooster.

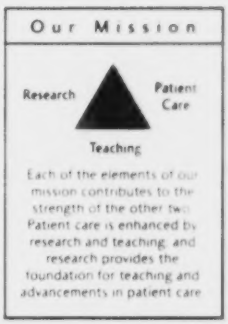
Today, there are 236 research scientists affiliated with OARDC. They are working at 14 different Ohio locations toward the goal of scientific results that benefit all Ohioans.

In 1905, an OARDC experiment established that silage (silo fodder) could profitably be substituted for a considerable portion of grain fed to cattle. More recently, OARDC scientists discovered that restricting feeding early in a steer's life makes the animal's metabolism more efficient – a discovery that could help Ohio's beef producers triple their profits.

In 1970, OARDC scientists incorporated a disease-resistant gene into greenhouse tomato lines. These varieties were credited with saving the greenhouse industry in Ohio. Currently, scientists are using new technologies to develop disease-resistant varieties for Ohio's $20 million processing industry.

A Research and Development Success Story

A conversation which took place ten years ago between an Ohio State University oncologist and one of his patients has led to new weapons in the battle against cancer.


Our Mission
Research
Patient Care
Teaching
Each of the elements of our mission contributes to the strength of the other two. Patient care is enhanced by research and teaching, and research provides the foundation for teaching and advancements in patient care.

Arthur G. James Cancer Center Mission Statement

The oncologist had been developing radioactive substances that would "mark" tumor tissue by selectively seeking it. He told his patient about his work, and noted that if there were a way to detect the substances during surgery, patients and surgeons would be assured of more precise and complete tumor tissue removal, including tissue that could not otherwise be seen or "felt". Within a month of that conversation, the patient – who happened to be a faculty member of OSU's College of Engineering – brought the oncologist a prototype device to detect radioactivity during surgery. At that moment, a new field in immunology was born: Radioimmunoguided Surgery™ (RIGS®).

Neoprobe Corporation has further refined these tumor tissue-detecting substances. The radioactivity detector – named the Neoprobe® – has moved from the laboratory through patient testing to imminent FDA approval. There is every indication RIGS will profoundly impact colon cancer surgery and will become a major tool in the arsenal of surgical weapons against other types of cancer.

The Ohio State University is benefitting from licensing agreements with Neoprobe Corporation. In addition, Neoprobe Corporation has provided substantial support (nearly $1 million) for cancer research at the Arthur G. James Cancer Hospital and Research Institute, Ohio's only hospital dedicated exclusively to the treatment of cancer.

The James Hospital was opened in 1990. Its presence is consistent with a 1988 planning decision to build The Ohio State University's College of Medicine's exceptional strength in oncology into national pre-eminence. That, in turn, reflects the University's long-standing commitment to cancer research. The University was designated as a Comprehensive Cancer Center in 1976, and is currently one of 26 such centers designated nationwide by the National Cancer Institute. Ohio State's Center currently involves over 200 researchers who represent eleven of the University's colleges.

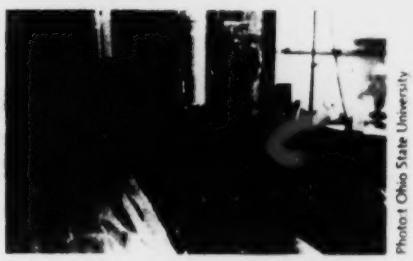


Photo © Ohio State University

A cancer research lab at The Ohio State University

Developing a 21st Century Workforce

In a global knowledge economy, the competitiveness of Ohio business and industry will mean a continual pursuit of innovation and high performance. The types of organizations needed in Ohio's 21st Century economy will be those that reward skilled, knowledgeable workers and continue to invest in workforce training and education.

21st Century Knowledge and Skills

Businesses and industries that create new technologies or use progressive methods of production or service will require employees with advanced degrees to lead research, design, and development, as well as highly skilled technicians to operate and troubleshoot complex systems and implement sophisticated quality improvement methodologies.

The service industries that will be vital to Ohio's future economy also will succeed based on the knowledge of their employees. Innovative business and technical consulting services, computer and telecommunications services, financial services, educational and media services, and creative services will be provided by employees who can maintain dynamic relationships with customers, understand complex concepts, and deftly use words, numbers, and images to generate unique ideas and solutions.

Organizations whose services improve the quality of life in Ohio – health care, environmental protection, government, and community development – will need employees with extensive and varied knowledge and skills to meet the complex challenges of the future. All of these areas will need people with high levels of specialized knowledge and skill in finance, planning, marketing, systems analysis, software development, and communication and a sound background in the liberal arts.

Training in the Workplace

Many businesses also will have specialized needs for workplace training and education. They may need training that incorporates equipment or computer systems within the workplace or that is integrated with actual work-related projects. Linkages between campuses and workplaces will become essential. To be productive in the knowledge age, workers will need to continually refresh their skills and update their education. Ohio must ensure that higher education will have the technology infrastructure to meet these needs.

"By helping business and industry adapt to developments in technology, manufacturing, and management, Ohio's community and technical colleges have become essential partners in the transformation of the workplace. This partnership is becoming increasingly pivotal to the health of Ohio's economy, both locally and globally."

Kenneth A. Yowell,
President,
Edison State Community College

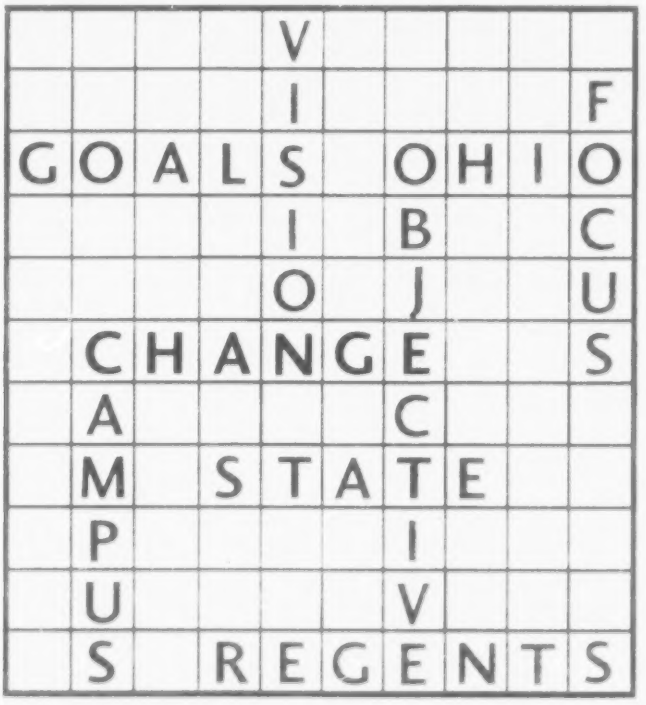
The Centrex Corporation is one of the Northwest Ohio companies linked to Owens State Community College through a high-powered, fiber-optic network. This network allows Owens to deliver training to employees located at multiple sites and sometimes multiple companies.

Photo: Owens State Community College

Strategies For Meeting the Challenges

The strategies presented here are divided into two major groups: Campus-Level Strategies, which are the responsibility of Ohio's colleges and universities, and State-Wide Strategies, which are the responsibility of the Board of Regents. However, the two groups of strategies reflect one vision: a network of high performance individual campuses, each gaining added strength to fulfill its own unique mission and each contributing to state-wide needs.

In addition, many of the ideas share similar components: alignment of missions, quality, accountability, collaboration, technological innovation, and service to the citizens of Ohio. These components have tremendous strategic potential.



Over-Arching Objective

An Integrated Network of Strategically Focused, High Performance Campuses, Each Achieving Excellence in its Own Mission

Ohio's vision for higher education calls for a network of functionally differentiated, independently operated and governed college and university campuses that operates as an integrated, high performance system to meet the diverse educational needs of students and of Ohio's citizens, businesses, industries, communities, and regions. This vision will be realized through strategies that leverage the strengths of the individual campuses toward achieving state-wide objectives.

Each public college and university has created a Functional Mission Statement that defines specific opportunities to contribute toward meeting these needs within the region, community, or unique niche it occupies. By articulating its specific objectives, its unique capabilities and strengths, its valued services, its capacity for relationships and partnerships with other campuses and with business and industry, and its position in the structure of its community and region, each campus defines the areas in which it will focus. These strategic focus areas are what differentiates the role each campus has played and will play in meeting Ohio's diverse needs. With the Master Plan as a blueprint, campuses can intelligently create strategies and action plans that match their individual Functional Mission Statements and conform to broader concerns.

The Ohio Board of Regents is responsible for pursuing a state-wide strategic focus. The Board's consultation and collaboration will help each campus achieve a focus that complements that of other campuses and will encourage cooperation among campuses. To ensure a continuing focus on the strategies, campuses and the Board will work together to develop benchmarks for measuring progress in carrying out the strategies.

Collectively, the strategies of each campus and of the Board of Regents will comprise an integrated response to each of the state's needs. And it is only by working together that this needed transformation in higher education will be accomplished.

"It is well-known that the era of rugged individualism has been replaced by the era of the team player. But this is only the beginning. The quantum world has demolished the concept of the unconnected individual. More and more relationships are in store for us out there in the vast web of universal connections."

Margaret Wheatley, Leadership and the New Science

Campus-Level Objectives and Strategies

Objective 1: Improve Student Access and Increase Graduation Rates

Strategy 1: Promote Efforts to Increase the Access and Success of Educationally Disadvantaged Groups in Higher Education

Strategy 2: Increase Commitment to Providing Effective Developmental Assistance to Students at Ohio Campuses and to Assisting in Efforts to Improve Preparation of Future College Students

Strategy 3: Use Technology to Serve Greater Numbers of Students and Create Greater Flexibility in the Time and Location of Learning

Strategy 4: Develop New and More Effective Ways to Motivate Students to Complete Their Degree Programs in the Shortest Possible Time

Objective 2: Improve the Quality of the Learning Experiences

Strategy 1: Encourage and Reward Scholarship in Teaching

Strategy 2: Increase Engagement of Ranked Faculty in Undergraduate Education

Strategy 3: Create and Apply Learner-Centered Approaches

Strategy 4: Collaborate in Developing New Learning Experiences

Strategy 5: Assess Student Learning Outcomes and Use the Results to Enhance the Quality of the College Learning Experience

Objective 3: Focus Research to Achieve Optimal Benefits

Strategy 1: Focus on Areas of Excellence in Both Basic and Applied Research

Strategy 2: Identify How Research Can Contribute to Community Revitalization, Regional Development, and Quality of Life

Strategy 3: Pursue Activities That Add Value to Research

Objective 4: Become a Vital Partner in Enhancing Ohio's Economy and Quality of Life

Strategy 1: Support Workforce Enhancement

Strategy 2: Align Services with the Needs of the Public

Objective 5: Deliver the Greatest Benefit from Resources.

Strategy 1: Improve Productivity and Efficiency

Strategy 2: Develop and Meet Standards of Quality in All Areas

Strategy 3: Develop Collaborative Partnerships

State-Wide Objectives and Strategies

Objective 6: Improve the Predictability and Stability of State Funding

Strategy 1: Improve the Financial Support for Higher Education in Ohio

Strategy 2: Redeploy Assets More Productively

Strategy 3: Increase the Public's Awareness About the Value of Higher Education

Objective 7: Focus the State's Investment

Strategy 1: Promote Complementarity of Campus Missions

Strategy 2: Promote Effective and Appropriate Complementarity of Graduate Education

Strategy 3: Coordinate the Alignment of Campus Research Strengths with National and International Directions and State Goals

Strategy 4: Strengthen the Technology Infrastructure

Objective 8: Implement a Funding Model That Reflects Ohio's Goals for Higher Education

Strategy 1: Consider for Implementation the Recommendations of the Higher Education Funding Commission

Strategy 2: Create and Implement Performance Measures/Benchmarks

Strategy 3: Develop a Quality and Innovation Funding Initiative

Objective 9: Enhance State-Wide Coordination

Strategy 1: Provide Improved Management Information

Strategy 2: Identify State-Wide Responsibilities

Strategy 3: Use Technology to Coordinate Availability of Resources Throughout the State

Campus-Level Objectives and Strategies

Based on its understanding of Ohio's overall needs and the expectations of stakeholders, the Ohio Board of Regents has identified five major objectives that should be the focus of planning efforts at all Ohio campuses:

- Improve student access and increase student graduation rates for the college or university.
- Improve the quality of the learning experiences sponsored by the college or university.
- Focus research at each university to achieve optimal benefits.
- Become a valuable partner in enhancing Ohio's economy and quality of life through research and public service.
- Deliver the greatest benefit from resources by continuing to improve productivity and efficiency.

Along with each objective are strategies that can be employed to meet the objective. Since Ohio's higher education community has always valued local autonomy, and since its vision requires mission differentiation among campuses, each strategy is to be considered, adapted, and prioritized by local boards of trustees, according to the mission of the college or university.

Objective 1: Improve Student Access and Increase Graduation Rates

Ohio's colleges and universities are encouraged to find efficient and innovative ways to remove many of the barriers that prevent citizens from receiving college degrees.

Strategy 1: Promote Efforts to Increase the Access and Success of Educationally Disadvantaged Groups in Higher Education

A major priority is expanded access to higher education for under-represented groups – students from minority groups, students from Ohio's Appalachian region and its inner cities, and economically disadvantaged segments of the population. Providing these citizens equal opportunities to participate and share in the benefits of higher education is a moral imperative, as well as an economic necessity. Ohio's

Since 1981, Wright State University students with disabilities have been involved in summer internship programs. Scott Clause (center), an alumnus and Computer Accommodations Program (CAP) Manager at Wright Patterson Air Force Base, recently worked with two interns who conducted research and wrote reports on new adaptive technologies for the disabled.

Photo: Wright State University

economic competitiveness will depend on its ability to develop this untapped resource.

Within the parameters of their individual missions, campuses are encouraged to pursue the following activities:

- Increase activities aimed at the recruitment and retention of educationally disadvantaged students.

- Improve access to technological solutions and services that enable students with disabilities to pursue higher education.

- Work with schools to improve academic preparedness of entering freshmen and to avoid the need for remediation.

- Provide refresher courses for older adults who may need them in order to benefit from higher education.

Photo: Mike Dicsn

Ohio University posted a freshman-to-sophomore retention rate of 83% in 1995, up from 67% in 1972. Graduation rates here also improved. At the same time, the University has increased admission standards and academic rigor.

Strategy 2: Increase Commitment to Providing Effective Developmental Assistance to Students at Ohio Campuses and to Assisting in Efforts to Improve Preparation of Future College Students

Expanding access to higher education will not achieve the desired results if large numbers of entering students are incapable of doing college-level work. Partnerships between the K-12 and higher education communities can keep teachers better informed of what colleges and universities require of students and motivate some students by providing a tangible, exciting goal.

Within the parameters of their specific missions, campuses are encouraged to pursue the following actions:

- Encourage faculty to establish partnerships with teachers in elementary schools, high schools, and vocational centers.

- Encourage faculty to become active participants in the SchoolNet Regional Communities of Practice.

- Encourage faculty research to address problems that prevent K-12 students from entering higher education or contribute to their failure.

" The primary mission of every institution in the state is, in fact, undergraduate education and protecting access to undergraduate education will strengthen Ohio in the long run."

Carson K. Miller, President, Washington State Community College

Strategy 3: Use Technology to Serve Greater Numbers of Students and Create Greater Flexibility in the Time and Location of Learning

Technology offers campuses the opportunity to expand the learning options available to students. Distance education, available through the use of fiber-optic networks and interactive video technology, provides an important option for reaching beyond the classroom walls, taking education directly to the students when appropriate. Even simple technology, such as e-mail, offers students more opportunities for interacting with faculty about instructional issues.

Within the parameters of their individual mission statements, campuses are encouraged to use distance learning capabilities to extend education to students who are unable to attend classes on campus or who need additional flexibility in scheduling.

Strategy 4: Develop New and More Effective Ways to Motivate Students to Complete Their Degree Programs in the Shortest Possible Time

Financial aid, new types of learning experiences, developmental assistance options, and the improved flexibility made possible by technology are valuable ways to remove the obstacles that now prevent many students from completing their degrees. However, as more nontraditional students enter higher education and as society and the economy continue to change, existing challenges may become more complex and new ones may arise.

Campuses are encouraged to continue communicating with students about the factors that could prevent successful degree completion and seeking new, innovative ways to remove geographical, financial, logistical, and psychological barriers for all students.

Kent State University Professor John Jewell teaches a Fundamental English Grammar class to students at both the Tuscarawas and Kent campuses simultaneously through innovative software, sophisticated computer workstations, and state-of-the-art telecommunications technology. Professor Jewell said developing the course was an exercise in "re-examining the teaching and learning process as a whole." He had to rethink course content, transforming it from a lecture/textbook mode to visually dynamic, highly interactive computer-based lessons.

Objective 2: Improve the Quality of the Learning Experiences

Describing the ideal learning experience in specific terms is impossible. The requirements of different disciplines and the needs of different students vary. However, the Board of Regents believes that the learning experiences of students can be enhanced significantly in two important ways.

First, the time faculty spend interacting with students should increase. In particular, undergraduates at four-year campuses should have greater exposure to faculty experts in their disciplines, more opportunities to be advised, coached, and mentored by faculty, and more active involvement in research and innovation.

Second, the emphasis needs to shift from teaching to learning. Today's students will need to be efficient, self-directed learners throughout their lives. They will not develop this capacity if their educational experience consists only of a series of instructors transmitting information in a lecture format. Students should be active participants in the learning process, and they should be encouraged to develop learning strategies that suit their individual learning styles.

The following strategies can help bring about these changes:

Strategy 1: Encourage and Reward Scholarship in Teaching

The best way a college or university can enhance the quality of learning experiences is to ensure that teaching is encouraged, valued, and rewarded. In addition to the scholarship of discovery that characterizes research, Ohio colleges and universities need to pursue scholarship in the synthesis, transmission, and application of knowledge.

Within the parameters of their individual mission statements, campuses are encouraged to pursue activities in the following areas:

- Recognize and promote scholarship in the teaching, integration, and application of knowledge.
- Develop new linkages between faculty teaching and research activity.
- Encourage efforts by faculty to involve undergraduates in research.
- Establish centers for teaching excellence.

FACULTY WORKLOAD STANDARDS

Teaching is central to the role of the faculty member and has long been recognized as the primary mission of Ohio's public universities and colleges. In recent years, there has been a marked tendency on many campuses to redefine the faculty role toward a greater emphasis on graduate education and research. The statewide faculty workload standards provide a framework for greater differentiation of the faculty role and especially for giving greater priority to undergraduate teaching activities while continuing to encourage faculty research and graduate education, as appropriate to the mission of the academic department and university.

- Departments with associate degree programs are expected to devote between 80-90 percent of their total faculty workload to teaching activities with the remaining 10-20 percent devoted to professional development and service. Practices at community and technical colleges may call for teaching to be 100 percent of a department's effort.

- Departments with baccalaureate degree programs and no graduate programs are expected to devote between 70-80 percent of their total faculty workload to teaching activites with the remaining 20-30 percent devoted to other scholarly activities of research/creative activity and service.

- For departments with baccalaureate and masters degree programs the expected norm for teaching activities is 60-70 percent of the total faculty workload with the remaining 30-40 percent devoted to research/creative activity and other professional activities consistent with the department's mission.

- For departments with baccalaureate, masters and doctoral degree programs the expected norm for teaching activities is 50-60 percent of the total faculty workload with the remaining 40-50 percent devoted to sponsored and departmental funded research/creative activity, service, and other professional responsibilities which further the goals of the department and university.

- Create faculty development programs.

- Create new approaches to evaluating teaching performance.

- Create rewards for excellent teaching.

Strategy 2: Increase Engagement of Ranked Faculty in Undergraduate Education

Public universities in Ohio already have begun directing greater faculty attention to improving the overall quality of the undergraduate learning experience. One component of this effort is the development and implementation of statewide Faculty Workload Guidelines. These guidelines, which can help restore a more appropriate balance to faculty teaching and research roles, are a first step toward ensuring that undergraduates are provided with high quality learning experiences and that excellent teaching is encouraged, valued, and rewarded within each university.

Ohio's public colleges and universities implemented the guidelines for the first time in the 1995-96 academic year by holding each academic department, or its equivalent, accountable for meeting specified teaching performance expectations.

Depending on the mission of the department, these expectations provide flexibility in faculty

assignments. For example, faculty in departments that offer only baccalaureate programs will devote more time to undergraduate teaching than departments that offer both undergraduate and graduate programs. Departments with similar missions will have similar expectations.

Institutions have implemented the guidelines and are gathering data that can help in refining the guidelines and assessing performance.

Within the parameters of their individual mission statements, campuses are encouraged to continue implementing Faculty Workload Guidelines and to develop and implement policy guidelines on faculty performance and evaluation.

Strategy 3: Create and Apply Learner-Centered Approaches

In changing the focus of higher education from teaching to learning, the challenge is to create learning environments that actively engage students, encourage collaboration, and support student learning across a range of different learning styles.

With the availability of CD-ROM and multimedia technology, faculty are challenged to find more creative and interactive ways to share their expertise. With the availability of computer networking technology, they are challenged to discover new ways of communicating with their students, incorporating outside expertise, and creating more collaborative learning experiences.

Within the parameters of their individual mission statements, campuses should:

- Encourage educational strategies that require students to direct more of their own learning, participate actively, work collaboratively, and use resources and experiences outside the classroom.
- Encourage faculty to explore alternative learning strategies for different learning styles.
- Encourage the use of general education courses to develop students' abilities in reasoning logically, expressing themselves clearly and convincingly, and analyzing and solving problems.
- Engage faculty in the identification, creation, and use of technology to enhance student learning.
- Devote more time and resources to faculty development in the use of learning technologies.

"Faculty members who are teacher scholars are needed. They must be properly equipped with effective teaching competencies and have a thorough knowledge of their disciplines. Most importantly, they must be evaluated on their ability to demonstrate these competencies."

Leslie H. Cochran
President,
Youngstown State University

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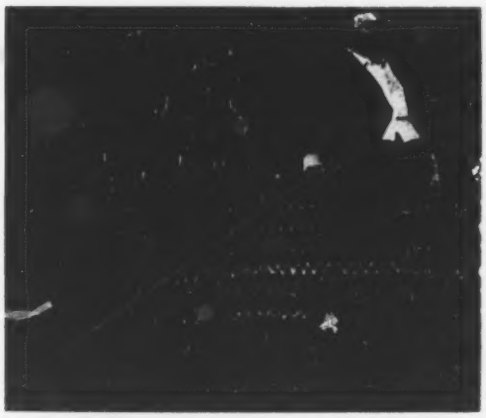
Strategy 4: Collaborate in Developing New Learner Experiences

As many students will learn upon graduation, innovation is usually the product of collaboration. More innovative approaches for enhancing student learning will result if faculty share ideas, expertise, and the work of implementation.

Campuses are encouraged to create opportunities for faculty to experiment, collaborate, and share "best practices" and to reward collaborative efforts to enrich student learning.



The Otto B. Schoepfle Vocal Arts Center at the Oberlin College Conservatory of Music is equipped with computer graphic displays of audio signals. Richard Miller, Professor of Singing and Director of the Center, says that students progress more rapidly when they can see and hear their voice at the same time.

Strategy 5: Assess Student Learning Outcomes and Use the Results to Enhance the Quality of the College Learning Experience

There is a growing awareness nation-wide of the value of assessing student learning outcomes. Over the past decade a wide range of assessment tools have been developed to enable educators to appropriately evaluate student learning in a variety of academic programs. Many of Ohio's campuses already are engaged in student outcomes assessment and many more will be in the next few years as they strive to meet new review procedures for re-accreditation.

While no single student outcomes assessment tool is suitable for all programs, the selection of a combination of appropriate evaluations by individual colleges and universities offers a rich opportunity to determine the quality of the students' learning experience and to use those results to enrich that experience.

In the knowledge age, assessment must be expanded and enhanced. In a time when liberal learning will be of even greater importance, outcomes assessment will be one means of ensuring that students have acquired the skills crucial to intellectual inquiry, logical reasoning, critical thinking, and self-expression.

Objective 3: Focus Research to Achieve Optimal Benefits

Important advances in science, innovative technologies, effective models, and successful methodologies evolve in many different ways. Often, however, they begin with discoveries during the course of basic research projects – projects that originated only from a desire to advance knowledge. Often, these discoveries are joined with other knowledge, applied to a variety of pressing problems, incorporated into many useful applications, and used as a basis for new discoveries.

Therefore, Ohio's universities need to work individually and collectively toward achieving a balanced array of research activities – pursuing specific solutions and creating the potential for new directions. They also need to work toward maximizing the benefits of research for universities and the state.

Strategy 1: Focus on Areas of Excellence in Both Basic and Applied Research

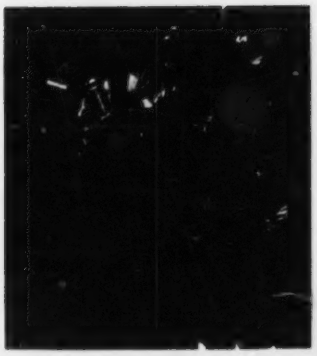
Research excellence encompasses many factors, including superior expertise, an existing foundation of accomplishments, powerful facilities and equipment, and the potential to make an important contribution. Universities are encouraged to focus on areas in basic and applied research where they can achieve excellence.

Strategy 2: Identify How Research Can Contribute to Community Revitalization, Regional Development, and Quality of Life

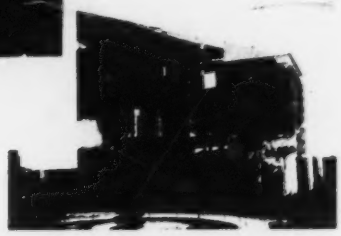
As the 21st Century approaches, Ohio's universities will be called upon to sharpen their focus on the research needs of the state.

Research capabilities and accomplishments in growth areas, such as biotechnology, biomedical engineering, material sciences, molecular life sciences, and environmental sciences, are essential to Ohio's efforts to stimulate the development of new high tech businesses.

In addition, it is important to identify research projects that address pressing needs in areas such as education and community development. For example, research on those factors that contribute to student dropout rates in public schools potentially could save the state millions of dollars if the research is applied to



The University of Akron's Polymer Science building stands as a symbol of the central role University research has played in the city's new status as a national and international center of the polymer industry.



increase high school retention and graduation rates. Similarly, higher education should use its resources to increase the effectiveness of K-12 mathematics and science education which, in turn, could increase the state's technological capacity by providing a better prepared workforce receptive to pursuing higher education.

Therefore, within the parameters of their individual mission statements, Ohio campuses are encouraged to develop innovative programs that offer long-term benefits to the state's economic development and, in particular, to collaborate with K-12 teachers in research projects that will enhance preparation of students for higher education and entry into the work force.

Strategy 3: Pursue Activities That Add Value to Research

If a research investigation is to achieve maximum benefits, its value must be promoted at every stage. Therefore, within the parameters of their individual mission statements, Ohio campuses are encouraged to increase activities in the following areas:

- Pursue both traditional and alternative funding sources for research.
- Seek ways to align theoretical and applied research more closely.
- Match the strengths of their research programs with the state's economic development goals.
- Transfer technologies to businesses to support community and regional economic growth and development.
- Collaborate with one another and with business and industry.
- Pursue entrepreneurial opportunities.

Objective 4: Become a Vital Partner in Enhancing Ohio's Economy and Quality of Life

Ohio's higher education system will play a vital role in the state's ability to address 21st Century challenges and opportunities. Likewise, a robust economy, growing regions and communities, and productive citizens will strengthen the higher education system. Therefore, Ohio's colleges and universities need to develop strategies in concert with the goals of Ohio employers, communities, regions, and state entities.

Strategy 1: Support Workforce Enhancement

In addition to research capabilities, the development of new businesses will require a major commitment to the development of Ohio's workforce. New high tech businesses will locate in states that can offer not only significant concentrations of high quality scientists and engineers, but also innovative managers, information specialists, technicians, and a variety of talented support personnel at all levels.

All employees in these businesses, including those working in processing or production facilities, will be required to provide excellent abilities in solving problems, communicating, and working in teams. These workers will need not only college degrees but also continual education as new technologies, techniques, and business opportunities emerge. Ohio's colleges and universities will need to provide more education to workers at off-campus sites including the home and work place.

Within the parameters of their individual mission statements, campuses are encouraged

With Kent State University as its partner, the Davey Tree Company converted its textbook training programs into Internet-based courses that give immediate feedback. Kent State also helped Davey create on-site disease diagnosis materials and CD-ROM-based programs that allow learners to interact with "live" scenes such as the one shown here.

to collaborate with business and industry toward a more technologically knowledgeable and prepared workforce.

- Develop both strong liberal learning opportunities and specific training and education that meets the general and specific needs of the workplace.

- Develop innovative approaches to using technology in providing education and training to Ohio's work force.

- Develop mechanisms for determining the outcomes of their work force enhancement initiatives.

Photo by Gary Hummel

General Motors and Chrysler Corporation officials were on hand when Sinclair Community College President David Pontz accepted the Award for Excellence in Automotive Service Program award, signifying the best automotive service technician training program in the nation. Sinclair's associate degree program is affiliated with both manufacturers.

These Ohio University sorority women sponsored a food drive to help meet local needs.

Strategy 2: Align Services with the Needs of the Public

Each campus has many opportunities to provide services that benefit its community and region, and sometimes, citizens throughout the state. Finding new ways to share their knowledge or resources with members of the community, helping local business and industry assess and adopt new technologies and techniques, participating in important local causes or projects, providing vital services to needy members of a community at no charge, and offering unique adult education options are a few examples.

Within the parameters of their individual missions, campuses are encouraged to develop the services that offer the greatest benefits to the public.

Objective 5: Deliver the Greatest Benefit from Resources

When additional resources are unavailable, high performance campuses need to find ways to continue current activities using less time and fewer resources, but achieving increased output.

Strategy 1: Improve Productivity and Efficiency

As campuses innovate, test new strategies, and apply new technologies they will need to focus on delivering high quality instruction to greater numbers of students and improving quality at a manageable cost. Campuses are encouraged to develop productivity approaches that can be shared on a state-wide basis and to measure productivity and share the results of their measurements with the public.

Strategy 2: Develop and Meet Standards of Quality in All Areas

It is becoming increasingly important that campuses develop quality standards and measurements that reflect their drive toward excellence and enable them to demonstrate progress.

Ohio is now blanketed with Articulation Agreements that establish clear pathways for students moving from two-year to four-year campuses. Here, The Ohio State University President E. Gordon Gee (left) and Clark State Community College President Al Salerno celebrate the signing of their agreement.

Strategy 3: Develop Collaborative Partnerships

Collaboration among faculty, among departments, among colleges and universities, among public and independent colleges, and between campuses and the business community promotes quality by helping to focus personnel and fiscal resources more effectively and by advancing integrated learning. Whenever feasible, campuses are encouraged to share resources and collaborate as a way of leveraging their resources.

For the past several years, the Board of Regents has emphasized the importance of collaborative program development to reduce expenditures and to enhance the strength and richness of curricular opportunities for students. This positive thrust reflects the broader principles of accountability, access, and scholarly community.

Objective 6: Improve the Predictability and Stability of State Funding

In the area of public investment in higher education, Ohio ranks 39th in the nation. To bring Ohio up to the national average in state and local support for public colleges and universities would take a $300 million annual increase. Although the projected state budget for 1996-97 shows some improvement, greater effort will be required to bring funding up to the national average.

Strategy 1: Improve the Financial Support for Higher Education in Ohio

The Ohio Board of Regents will redouble its efforts to serve as an advocate for achieving needed state resources for higher education and exploring alternative sources of funding.

The Board also will develop specific measures to be used for tracking Ohio's progress in moving closer to the national average in terms of public funding for higher education.

Strategy 2: Redeploy Assets More Productively

The Board of Regents will work to identify areas in which ineffective spending or inefficient use of resources is contributing to Ohio's poor ranking in funding for higher education. In particular, the Board will continue working to encourage the shifting of resources from the capital budget to the instructional subsidy.

Strategy 3: Increase the Public's Awareness About the Value of Higher Education

Greater accountability to stakeholders provides the higher education system with an excellent opportunity to demonstrate how vital higher education is to Ohio and how difficult it is to meet public needs when funding for higher education continues at a level well below the national average.

The Board of Regents will initiate a state-wide effort to inform the public about the benefits of higher education, including its potential contributions to economic development and increased tax revenues for the state.

Objective 7: Focus the State's Investment

At a time when college and university budgets are tightly constrained, the Board of Regents has been called upon to ensure that state support to institutions serves regional or state priorities. The Board of Regents will maximize the impact of the state's limited resources by eliminating unnecessary duplication and focusing investments in areas that serve state and regional priorities.

Strategy 1: Promote Complementarity of Campus Missions

Ohio's public colleges and universities are in the process of articulating their individual and collective missions and identifying how these missions are to be performed, measured, and rewarded.

Each two-year college and university campus has developed a complete description of the role it sees itself playing in the community, region, and the state. Each has identified a specific mission statement that highlights the services it will provide, ranging from workforce training to research and doctoral education.

The Board of Regents will work with each campus to assess its functional mission and come to an agreement about how the campus can best serve the state in the future. Once the Regents and a university agree on an appropriate mission it will become the basis on which specific service expectations and measures will be developed. The full set of expectations will reflect the diversity of missions among the universities. The outcome of this process will be greater mission differentiation among Ohio's colleges and universities.

Strategy 2: Promote Effective and Appropriate Complementarity of Graduate Education

An initial strategy for meeting this goal is identifying and reviewing unnecessarily duplicative programs. Because doctoral and professional education is highly expensive, the focus will initially be on these programs.

The Board of Regents has already reviewed nine academic disciplines and three professional program areas. These reviews provided individual universities and the state the opportunity to make decisions regarding the elimination or consolidation of programs as a first step in providing greater focus to the state's investment of resources in graduate education. As a result of these reviews, subsidy funding was withdrawn or suspended for 22 doctoral programs. An additional 37 programs will be reviewed within three years to determine if sufficient improvements have been made to warrant the continuation of state subsidy.

This collaborative review process between public universities and the Board of Regents will continue in the future. It is an effective strategy for ensuring that there is an appropriate complementarity of graduate education throughout the state.

Strategy 3: Coordinate the Alignment of Campus Research Strengths with National and International Directions and State Goals

The Ohio Board of Regents can assist campuses by developing state-wide approaches for leveraging the research strengths at Ohio colleges and universities.

Through the Research Challenge, the Ohio Supercomputer Center, and OhioLINK, the Board of Regents will continue helping selected programs in basic research. The Board will share information about the research and development strengths of Ohio campuses with the Ohio Science and Technology Council and other groups with access to new opportunities for funding.

Strategy 4: Strengthen the Technology Infrastructure

The Technology in Education Steering Committee, jointly created by the Chancellor of the Ohio Board of Regents and the Superintendent of the Ohio Department of Education, has called attention to the need for greater connectivity at all Ohio colleges and universities and has recommended that the next three biennial budgets include substantial funding to assist campuses in enhancing their technological infrastructure.

WHAT DOES OHIO EXPECT ITS TWO-YEAR COLLEGES TO DO?

Ohio's sizable network of two-year colleges spans the entire state. Each two-year college is expected to respond to community and regional needs, and to make a basic package of essential services available in its region. Specifically, Ohio expects each two-year college to:

- Offer collegiate-level instruction in technical fields, preparing students for jobs and/or futher study.
- Offer collegiate-level instruction that is equivalent to the first two years of study on a university main campus, preparing students for transfer to and continued study in a four-year university.
- Offer programs that help students who need to "brush up" or "catch up" on skills and content areas essential to success in college.
- Help local industry, business and government meet their workforce training and economic development needs.
- Offer courses and other instruction programs that do not carry academic credit but nevertheless help people keep current in their fields, pursue intellectual and personal development goals, sharpen skills, etc.
- Work with local high schools to help students and their families plan a future that includes higher education.
- Offer courses at times convenient for students, recognizing that many must build their class schedules around demanding work and family responsibilities.
- Keep tuition charges affordable and within a framework that ensures comparable access to public two-year colleges and campuses across the state.
- Provide for community representation in campus decision-making processes.

The High Performance Campus proposal calls for each two-year college to receive some state support based on its successes in delivering this basic package of educational services.

WHAT DOES OHIO EXPECT ITS STATE UNIVERSITIES TO DO?

The Regents propose seven "Core Services Expectations for State Universities." They are not mutually exclusive; they do not fully describe or define the work of Ohio's public universities. But they do provide a clear frame of reference for change.

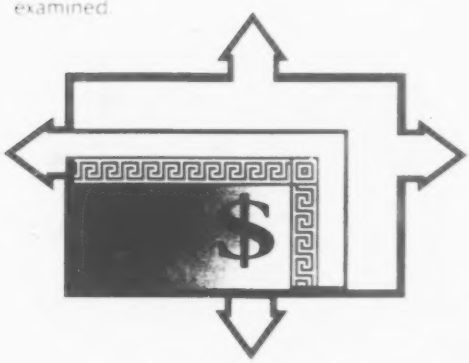
- Recognize baccalaureate-level education as a central function, and provide a reasonable range of high quality baccalaureate programs which are intellectually challenging and responsive to students' career goals and to Ohio's long- and short-term human resource needs.
- Provide, collectively, a range of strategically-focused graduate programs of high quality and clear viability, within a significant but limited share of the state support provided for public higher education.
- Form ongoing regional and statewide partnerships with other colleges and universities and entities outside higher education to ensure continuous improvement and responsiveness in the delivery of higher education's services to Ohio's people, communities, and employers.
- Deliver services at the most reasonable possible combination of cost to the university and price to the consumer, taking into account standards of quality, differentiated academic missions, and available resources.
- Strengthen Ohio's science and technology knowledge base to improve the state's economic competitiveness.
- Serve as repository, transmitter, and generator of theoretical and applied knowledge for the state, the nation, and the world.
- Focus special attention on individual, differentiated academic missions, developed in consultation with the Ohio Board of Regents and judged by the Regents to be consistent with state and regional service needs.

The Ohio Board of Regents will advocate creation of a funding mechanism that will ensure a baseline level of services to all campuses and enable all campuses to move forward, regardless of their current individual levels. Achieving the baseline level will enable Ohio to develop a coherent and evenly distributed technology infrastructure that connects all the state's institutions with each other and with industry, government, and K-12 schools. Continued growth in the technical capacities of Ohio's campuses will enable institutions and faculty to meet Ohio's future instructional, economic, and research needs.

Objective 8: Implement a Funding Model that Reflects Ohio's Goals for Higher Education

Ohio's current funding mechanism for colleges and universities is primarily enrollment-driven. While such a system serves very well in times of enrollment growth and budget increases, it can produce campus funding difficulties in prolonged periods of constrained resources.

In light of Ohio's interest in stimulating improved performance, funding mechanisms related to achieving desired outcomes will be examined.



Strategy 1: Consider for Implementation the Recommendations of the Higher Education Funding Commission

The Higher Education Funding Commission is conducting a comprehensive review of the way Ohio finances higher education in order to provide recommendations to the Ohio Board of Regents on the appropriate funding mechanisms, particularly in the distribution of higher education's instructional subsidy in order to reach higher education goals. Members of the Commission have varied backgrounds and offer high quality expertise for this complex task.

Strategy 2: Create and Implement Performance Measures/ Benchmarks

Ohio's higher education community can be certain that the citizens of Ohio are receiving high quality education only if what is done is measured. The entire campus community is encouraged to work together both on achieving change and on measuring the performance of the system. The Board of Regents needs to create funding and support mechanisms that encourage high performance in meeting the goals of campus mission statements and statewide delivery of high quality education for Ohioans.

Ohio has already identified and implemented service expectations for its two-year colleges and the regional campuses of universities. These service expectations ensure that anyone

EVALUATION AND REWARD OF TEACHING

The Regents have identified several guiding principles that they believe public universities, colleges or schools, and departments should adopt in developing strategies to improve the quality of student learning through a greater focus on the evaluation of teaching, the on-going development of faculty and instructional staff as teachers, and the acknowledgment of the importance of teaching through faculty reward structures.

- Greater priority should be given to the undergraduate teaching role, at the same time that research and graduate education continue to be important dimensions of faculty responsibility.
- Institutional reward systems in all universities should recognize and value the importance of undergraduate teaching as comparable to other types of scholarship.
- The academic department (or its equivalent) is central to the process of achieving change in the academic climate for teaching. Teaching and faculty development activities are primarily focused in the department.
- The work of department chairs to encourage teaching and faculty involvement in undergraduate teaching must be visibly supported and acknowledged by the university's governance system.
- Long-term change in student learning must be addressed at all levels, including departmental, institutional, state, and national levels.
- Efforts to develop, evaluate, and reward effective teaching must focus on faculty at all career levels as well as graduate students who will be the future faculty.

who pursues higher education at a public two-year campus in Ohio will be able to access the same basic level of academic programs and services.

During FY 1996 (July 1995 - June 1996), funding for two-year campuses has been linked to performance on five of the nine service expectations.

During FY 1997, the Ohio Board of Regents will implement all nine of the service expectations for two-year colleges and regional university campuses. During the biennium 1996-97, service expectations for the universities will be developed. Initially, these expectations will identify performance expectations that are common to all of Ohio's state universities. The Board of Regents should begin evaluating the performance of universities and distributing performance funding beginning in the 1998 biennium.

Increasing levels of funding provided to universities will reflect the performance of the campus in accordance with agreed-upon performance measures. Five core areas of performance are a current topic of discussion between the universities and the Board of Regents: 1) Student access and graduation, 2) Effectiveness of the learning process, 3) Cost-effectiveness, 4) Contributions to knowledge, and 5) Service mission and its integration with teaching and research mission.

In addition, the Board of Regents will work with each university to develop an agreement that includes specific measures based on that institution's mission statement.

Strategy 3: Develop a Quality and Innovation Funding Initiative

The Board of Regents will begin the process of identifying areas in which the state and the higher education system as a whole would benefit from quality improvement and innovation efforts. The Board will seek ideas from colleges and universities.

Funds will be sought to support the testing of new ways to improve quality through the use of technology and innovation. Although it is impossible to know all of the possibilities for change that exist, some areas will be identified.

In addition, the Board of Regents and Higher Education Funding Commission will develop a funding mechanism for innovative efforts, develop a process whereby universities can propose initiatives, and develop a process for peer review of proposals and selection of the efforts that will receive funding.

Objective 9: Enhance State-Wide Coordination

The Ohio Board of Regents needs to support the campuses by effectively communicating with campus administrations and governing bodies and by collecting and sharing information that is relevant to the campus and state missions.

Strategy 1: Provide Improved Management Information

In order to assist campuses with management information for trustees and administration decisions, the Board of Regents will provide better and more accessible data for administrative use. These efforts will include improvements to existing management information systems and better access to these systems, as well as the environmental scanning activities of the Board of Regents.

Strategy 2: Identify State-Wide Responsibilities

Just as campuses are responsible for achieving their missions, so too is the Board of Regents. Like campuses, the Board has many responsibilities. But its primary one is to plan for higher education for the state, "considering the needs of the people, the needs of the state, and the role of individual and private institutions within the state in fulfilling these needs."

The Board will improve its process of evaluating these goals and work with campuses to understand better how to facilitate their educational efforts. It will further develop processes to understand before implementation the likely burden, particularly in reporting and information provision of decisions made by the Board of Regents, and thereby assess the potential value-added.

Strategy 3: Use Technology to Coordinate Availability of Resources Throughout the State

It is important that the state receive maximum benefit from the innovative new methods and services, technology applications, and other improvements being developed at various campuses. Technology provides a means for campuses to share excellent resources, information, and programs. The Ohio Board of Regents can facilitate the application of technology to resource-sharing by playing a coordinating role.

The Board of Regents will work with the Ohio Department of Education to create a statewide Technology in Education Collaboration Link (TECLink). This resource will help leverage the state's professional development resources related to integrating technology with the learning process.

Ohio's investment in technology is an investment in its faculty and students. These resources will assist faculty as they integrate technology into the learning pro

Photo: Ohio State University

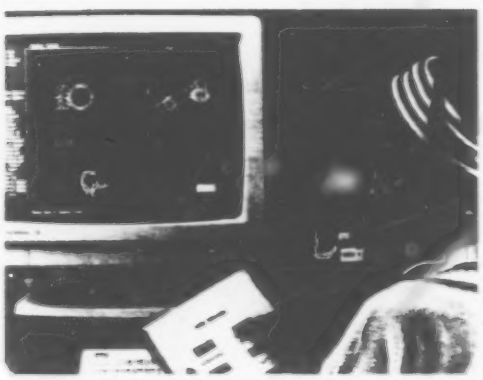


Photo: Ohio State University

OUR VISION: A HIGH PERFORMANCE NETWORK

Ohio will work toward achieving a vision of a coherent network of public college and university campuses that operates as an integrated, high performance system in meeting Ohio's diverse needs and th·: extends into Ohio's schools, its workplaces, its governmental bodies, and even into the homes of its citizens.

Each of Ohio s campuses would contribute to the performance of the total network by meeting and surpassing the standards of its unique mission and by collaborating with other campuses and with business and industry.

Collectively and individually, the campuses should

- Strive for a range of high quality learning experiences – blending experiences that develop specialized, 21st Century knowledge and skills with liberal learning experiences that equip each student for a lifetime of inquiring, reflecting, adapting to change, and seeking new skills and knowledge.

- Strive for educational innovation – shifting the focus from teaching to learning and pioneering new ways to deliver instruction, new types of learning experiences, and new relationships among students and faculty.

- Strive for total quality – continually seeking new ways to improve every aspect of the higher education system.

- Strive for strategic focus – developing and following a clearly articulated mission based on the contributions each can make toward meeting the state's diverse needs.

- Strive for excellent service to the state – meeting the needs of businesses, industries, and regions for advanced research and workforce enhancement and meeting the needs of citizens for lifelong learning.

- Strive for productivity and efficiency – developing more affordable educational options and making maximum use of available time and talent.

- Strive for cost-effectiveness – making good investments and using available resources wisely.

HIGHER EDUCATION: MEETING THE NEEDS OF OHIOANS

TEACHING / LEARNING

NEEDS OF THE STATE	NEEDS OF COMMUNITIES	NEEDS OF EMPLOYERS	NEEDS OF INDIVIDUALS AND FAMILIES
Higher college participation rates by Ohioans.	Labor force with education and skills required to attract and retain employers who offer jobs with adequate wage scales.	Labor force with needed skills in critical thinking, problem-solving, and communications.	Quality educational experience.
Higher rates of retention for undergraduates.	High rates of successful participation in higher education, especially at the associate and baccalaureate levels.	Labor force with needed technical skills substantive knowledge.	Affordable cost, in money and time.
Higher rates of degree completion.	A citizenry able to play an effective role in the development of a health community.	Opportunities to upgrade education and skills of current employees, perhaps at subsidized rates.	Courses offered and support services provided when needed by students with family and work commitments.
Higher rates of participation, retention and graduation by minorities and economically disadvantaged populations.	An effective relationship between K-12 and higher education so that high school grads are ready for college level work.		Preparation for future employment both in the immediate future and longer term, and both within and outside Ohio.
Affordable tuition and fees.	Opportunities for upward mobility as evidenced by enrollment and graduation of students from poor or minority backgrounds and from families with little experience in higher education.		Challenging curricula, appropriate to student abilities, with minimal redundancy of material covered in earlier studies, and leading to demonstrable and substantial learning.
Comprehensive workforce training programs.	Access to individuals with special skills.		Developmental programs as required to enable students to succeed in a challenging curriculum.
Workforce training partnerships with business, industry and government.	Developing leaders of local communities.		
Workforce educated with the skills needed to compete in a global economy.			
A partnership with K-12 to improve the overall quality of public education.			
Greater focus in the array of graduate, professional programs.			
Demonstrated efficiency in the management of public higher education.			

THE HIGH PERFORMANCE CAMPUS: MEETING THE NEEDS OF OHIOANS

NEEDS OF THE STATE	NEEDS OF COMMUNITIES	NEEDS OF EMPLOYERS	NEEDS OF INDIVIDUALS AND FAMILIES
RESEARCH			
Strengthen the state's science and technology base. Increases in sponsored research, especially in science and engineering.	Payroll, with related multiplier effects. Spin-offs of related private sector firms, R&D labs, etc.	Access to state-of-the-art expertise for consulting or employment. Opportunities for new process, new products.	Employment opportunities. Development of researchers for employment in academe, business, and industry.
SERVICE			
Increase the number of primary care physicians. Increase the number of technically trained and academically prepared graduates.	Availability of expertise for improvements in public policy and administration, especially in education and social welfare. Availability of lectures, concerts, and other cultural events. Improved health care delivery as a result of engagement of local physicians in medical education.	Availability of expertise for problem-solving and noncredit training. Opportunities for employees to engage in service to communities and cultural activities.	Opportunities for personal enrichment. Personal support for achieving goals. Lifelong learning opportunities.

Where Are We Heading?

Ohio's Class of 2006

Imagine that ten years have passed since Ohio's higher education community began its transformation to a high performance network of campuses.

Envision the future realistically. Recognize that in 2006, resources probably will continue to be constrained and that we'll probably still be dealing with the impacts of today's problems, as well as new ones caused by increasing change and complexity.

But remain optimistic. Assume that each of Ohio's campuses has been developing according to its functional mission but also that campuses have been working together toward common goals. Assume that public opinion of higher education continues to be positive overall.

From this realistic and optimistic perspective, envision these following developments:

Many Access Options

Ohio's Class of 2006 is highly diverse. Students represent a wide range of ages and socioeconomic groups. Ohio's Appalachian region and inner cities are well-represented in this class, as are Ohio's many minority groups.

In the Class of 2006, what we now call non-traditional students are the norm. Most students on Ohio campuses now pursue academic and career goals simultaneously.

To respond to this diversity, each campus has developed special programs and services that align with the student needs that are most prevalent. There is a state-wide network of programs for minority recruitment and retention. There are programs to help women pursue academic areas in which they are under-represented. There are assertive strategies to offset students' social and economic disadvantages, physical disabilities, and other potential barriers to higher education. When needs are too large or complex for one campus to meet adequately or when the demand for a service is too small to justify services at each campus, several campuses join together in regional or state-wide initiatives to provide the service.

Prepared Students

Most students in Ohio's Class of 2006 are comfortable with and academically ready for a collegiate environment. Those who made the transition to higher education directly from high school arrived on campus with a solid academic base that is the result of extensive collaboration between Ohio's schools and colleges.

Some high school graduates have already earned collegiate credits or received early exposure to advanced learning opportunities – special Saturday programs on a nearby campus, distance learning available at their high schools, or college-sponsored cultural programs in their communities. Many students attending two-year community and technical colleges came with a foundation of industry experience developed through participation in Ohio's Tech Prep program. Some spent some time in the workforce before starting college, gaining valuable job experience during and after high school through Ohio's School-to-Work program.

Emphasis on Liberal Learning

Most undergraduate students spend their time in continual inquiry, in discovering both the world and the self, in building a broad framework of knowledge and testing that knowledge by applying it. They gain valuable experience working with others and learning to excel at increasingly higher levels of performance.

They spend much time actively engaged in dialogue with faculty and other investigation, and in a range of unique learning environments created by innovative faculty. As the time passes, they begin to integrate what has been learned but also to follow more specialized paths, to deepen knowledge in selected areas, and to make decisions about career directions, about future study, and about life. Whatever the choice, each student approaches it with a suitable array of skills and knowledge and the ability to continue learning, as well as the habits of thoughtful reflection and ethical decision-making, a sense of values, and a commitment to society.

Recognition of Diverse Learning Needs

Students make academic progress in a coherent way. Mentored by faculty, they are developing their abilities to be independent learners who can work effectively with others and whose skills are assessed by the college or university. Students with academic weaknesses are given immediate access to developmental opportunities geared to their specific needs.

Photo: Bowling Green State University

Sustained opportunities for pre-college students to participate in campus life are widespread and highly valued.

Quality through Sharing Resources

Because each campus clearly articulates its mission, each student in Ohio's Class of 2006 has chosen an institution that aligns with his or her major academic and career goals. When students at Ohio campuses choose programs, they can be sure that quality is inherent to the curricular design. When doctoral students choose a university, they can be sure of a high concentration of excellent resources and world class faculty.

In some cases, students' goals cannot be met at one campus. When this occurs, the collaborative relationships among Ohio campuses ensure that all the important needs are met. The many linkages among campuses enable students to transfer when necessary or to combine course work at different campuses. Often, distance learning options allow students to take specialized courses offered at different campuses. As more and more obstacles to learning are removed, campuses are meeting their primary goal – to educate the students.

Improved Access through Distance Learning

Most Ohio students take advantage of distance learning options at some time. Classrooms with two-way television or individual computer workstations running video-conferencing software are increasing in number, and Ohio faculty are finding innovative new ways to make distance learning more engaging and interactive. Also increasing are innovative uses of the Internet to allow students at different locations to participate in classes.

Distance learning has helped improve the productivity and quality of colleges and universities. Sharing courses among the branch campuses of a university or community college often eliminates the need to duplicate resources unnecessarily or to discontinue courses that attract small numbers of students at an individual campus. Sharing courses among universities also benefits students as they advance in their disciplines and begin to develop unique needs for specialized or interdisciplinary study. They can meet these needs through distance learning while remaining in their original programs.

The Technology Transformation

For Ohio's class of 2006, technology has helped make learning a highly interactive experience.

Students stay in close touch with faculty because they can send electronic mail whenever they have a question or idea. Faculty use electronic mail to disseminate class information and provide individualized help to

Professor Arthur Schwartz of Cleveland State University has developed software that assists students in mastering English language pronunciations.

students. Electronic mail also enhances collaborative projects among students, particularly those who live off-campus.

Electronic forums also are making the learning process more interactive. Each academic discipline uses online bulletin boards, news groups, listservs, and World-Wide Web pages to conduct ongoing dialogue about important issues and questions. Some students who are reticent during in-class discussions are active participants in online debates.

Each institution has access to a vast collection of multimedia courseware and reference works. During class time, many faculty use computer-based tools to engage students in active problem-solving. After class, students interact with learning modules to review and supplement course material. Many of the modules were created by faculty members to address the problems they observed students having with the course material. Also, some faculty have used simulation technology to create more realistic learning experiences.

New Ways of Learning

Technology is only part of the paradigm shift in learning that is taking place at Ohio's campuses. Faculty also are developing and sharing many other innovative approaches to improving the learning experience for their students.

Most striking are opportunities for students to be active learners and critical thinkers instead of passive recipients of information. Most graduates of Ohio campuses take with them a portfolio of accomplishments that are relevant to the careers or advanced educational programs they will be pursuing.

Also notable is the amount of contact that students have with experts in their fields. Industry leaders, researchers, and government officials throughout Ohio play a vital role in helping prepare students for future employment.

Ohio's college and university students often visit elementary school classrooms.

Photo: Ohio State University

Increasingly, undergraduate students assist faculty in conducting research

Strong Ties to the Workplace

Boundaries between the workplace and Ohio's colleges and universities are easy to cross. Higher education works closely with business and industry to ensure that both are aware of the latest technologies and methods. Many more technical and community colleges offer programs that are structured to meet the job requirements of specific types of companies or industries. Faculty also are talking with employers to determine what knowledge and skills employees are lacking and then developing agreements for onsite, computer-based, or video courses. Often, a business with a technical or business problem receives regular visits from faculty, who work with employees to solve the problem and then use the experience as a real life example in their courses. In addition, Ohio campuses are the source of a large number of online or video-based liberal learning experiences that keep employees thinking creatively.

Many faculty and students participate in initiatives to improve the communities or regions where their campuses are located. Ties between colleges of education and nearby schools are continually increasing. Also, many economic development initiatives sponsored by industry or state government depend on the ideas and participation of the higher education community.

Along with strong ties to their local communities and their regions, students at Ohio campuses often work on projects of a global nature. Using the Internet and video conferencing technologies, faculty and students at Ohio's campuses are part of a world-wide network of collaboration.

New Dimensions in Research

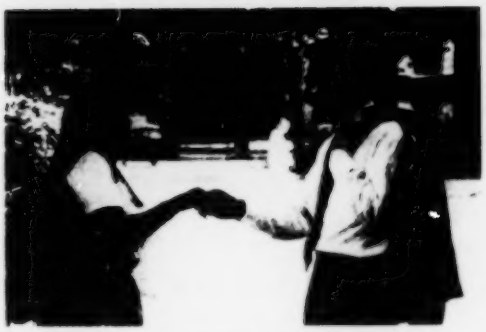
Outstanding research has continued to bring national prominence to many Ohio universities. However, research at Ohio's campuses has added some new dimensions.

Construction technology students working on a community service project

Many faculty have created innovative undergraduate research projects that require high levels of critical thinking and problem-solving skills and enable students to gain deeper experience in their core disciplines.

While graduate and faculty research at individual Ohio campuses is highly focused on areas of excellence, from a state-wide perspective, there is a high degree of integration. Each campus has created a research agenda that matches its strengths with important needs and blends its unique capabilities with those of research programs at other Ohio campuses and around the world.

Some research conducted at campuses in unique areas of the state, such as Ohio's twenty-nine Appalachian counties or its major urban areas, will contribute directly to solving problems of the region. In many cases, research consortia pursuing regional goals consist of several universities and two-year colleges, as well as businesses and government agencies in the region.



Bowling Green State University President Sidney Ribeau stops to greet a student.

An Integrated Network of Diverse Campuses

The public now views the state's 70 four-year and 52 two-year public and independent campuses from two perspectives. They see them as a collection of higher education resources that differ from each other in their levels of educational complexity, in their relationships with citizens, and in the roles they play in their specific regions. They see many excellent, affordable public colleges and universities, and they see an array of unique private colleges and universities that are committed to educating a diverse student population. They see the dedication to broad access of the large multi-campus systems.

such as Kent State University, and they see the same commitment in universities, such as Shawnee State, which bring educational options to isolated areas of the state. They see great diversity in atmosphere – from Cleveland State University in the heart of a major urban area to Hocking College, surrounded by a national forest. They see many variations in culture – from the inspiring liberal arts tradition of Oberlin to the research-intensive environment of The Ohio State University and the University of Cincinnati. They see vast differences in core emphases – from technology to the arts to religion to medicine. Each campus is now recognized and respected for its own areas of distinction.

A Shawnee State University academic advisor provides one-on-one guidance to a student.

Yet citizens also can see Ohio's campuses as a totality – one vast integrated higher education network that closely matches the complete spectrum of challenges Ohio will need to meet in the 21st Century.

Some Concluding Thoughts

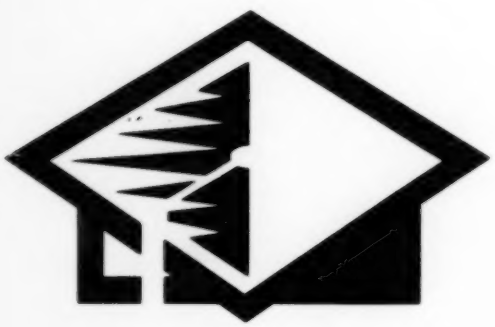
As each campus continues its strategic planning process, it is important to remember that:

- Today, the only constant is change. Planning must provide the flexibility to adapt to change and seize the opportunities it presents.

- Solutions seldom come in one glorious burst of change. More often, they will come bit by bit, piece by piece. Sometimes, it will be necessary to step back and look at the global picture before emerging solutions will be recognized.

- Ohio has a great many challenges to meet but also a great many strengths and potential opportunities. The greatest strength and the greatest opportunity is the range of unique, outstanding public and private options that now exists in Ohio. The greatest potential lies in combining those strengths and uniting to seize the opportunities.

An integrated high performance network will evolve as faculty, students, administrations, and boards of trustees from all Ohio colleges and universities, along with the Board of Regents, state government, and industry, become partners in serving the common good. Working together, our vision of higher education is within reach. Working separately and apart, it is unreachable.



Acknowledgements

Preparation of the 1996 Master Plan, "The Challenge is Change," required the thoughtful and consistent involvement of the many members of the family of higher education in Ohio – the members of the Ohio Board of Regents, members of the Board of Trustees of Ohio's public colleges and universities, the Presidents of the public colleges and independent colleges and universities, Provosts and other senior administrators, members of the Chancellor's Faculty Advisory Committee, the Inter-University Council, the Ohio Association of Community Colleges, the Association of Independent Colleges and Universities of Ohio, and the staff of the Board of Regents. Their contributions included the participation in regional focus sessions to discuss the major issues facing higher education in Ohio, arranging discussions of the Master Plan with their constituent groups, and providing critical evaluations of successive drafts. The importance of their contributions is evident on each page of the Master Plan.

A special recognition is merited by Regent Tahlman Krumm, Jr. for his participation and helpful advice throughout the planning, writing, and production of this Master Plan.

Although this report does not bear the names of the three former Regents whose nine-year terms expired in September of 1996 (Paul M. Dutton, Ralph K. Frasier, and Raymond T. Sawyer), its content was shaped in many ways by their their dedicated service and thoughtful consideration of issues. Several members of the Regents' staff also deserve recognition for their work in fashioning the final product – Richard L. Petrick, Associate Vice Chancellor for Budget & Information Systems, who researched the statistical data on higher education in the nation and Ohio; Linda J. Ogden, Director of Communications, who coordinated the graphic design and layout of the final copy; and Charles E. Corbato, Director of Information Services, who provided proofreading and file transfer services, and posted documents on the World Wide Web. Finally, a special appreciation is due Howard L. Gauthier, Executive Associate to the Chancellor for Planning, whose careful direction of the overall planning and writing of the Master Plan spanned years of effort and yielded a coherent, challenging path to our future.

Elaine H. Hairston
Chancellor
November, 1996

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